00134464

Digitized with financial assistance from

Government of Maharashtra

on 01 February, 2020

EAST INDIA (PROGRESS AND CONDITION).

STATEMENT

EXHIBITING THE

MORAL AND MATERIAL PROGRESS AND CONDITION

OF

INDIA

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

DURING THE YEAR 1911-12 AND THE NINE PRECEDING YEARS.

FORTY-EIGHTH NUMBER
(BEING THE FIFTH DECENNIAL REPORT).

IV.

134464

(*Presented pursuant to Act* 21 & 22 *Vict. c.* 106, *s.* 53.)

India Office,
22 July 1913.

T. W. HOLDERNESS,
Under Secretary of State for India.

26/50/15

Ordered, by The House of Commons, *to be Printed*,
22 *July* 1913.

LONDON:
PRINTED UNDER THE AUTHORITY OF HIS MAJESTY'S STATIONERY OFFICE
BY EYRE AND SPOTTISWOODE, LTD., EAST HARDING STREET, E.C.,
PRINTERS TO THE KING'S MOST EXCELLENT MAJESTY.

To be purchased, either directly or through any Bookseller, from
WYMAN AND SONS, LTD., FETTER LANE, E.C., and 32, ABINGDON STREET, S.W.,
and 54, ST. MARY STREET, CARDIFF; or
H.M. STATIONERY OFFICE (SCOTTISH BRANCH), 23, FORTH STREET, EDINBURGH; or
E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN;
or from the Agencies in the British Colonies and Dependencies,
the United States of America, the Continent of Europe and Abroad of
T. FISHER UNWIN, LONDON, W.C.

1913.

220 *Price* 4*s.* 6*d.*

00134464

PREFACE.

THE Statement exhibiting the Moral and Material Progress and Condition of India is presented to Parliament in each year in accordance with the requirements of section 53 of the Government of India Act, 1858 (21 and 22 Vict., cap. 106), which provides as follows:—"The Secretary of State in Council shall, within the first fourteen days during which Parliament may be sitting next after the first day of May in every year, lay before both Houses of Parliament an Account for the financial year preceding that last completed of the annual produce of the Revenues of India . . . and such Account shall be accompanied by a Statement prepared from detailed reports from each Presidency and District in India in such form as shall best exhibit the moral and material Progress and Condition of India in each such Presidency."

The Statement is prepared in the India Office from a large number of annual reports received from India. Many of these reports are compiled from information furnished by District and Political Officers, and are submitted to the Governments of the respective Provinces and to the Government of India for consideration and review before transmission to England; and some of them, which deal with the operations of important departments and require the careful consideration of the authorities in India, are not received at the India Office till about a year after the close of the period to which they refer. It is, therefore, not always possible to present the Statement to Parliament within the limit of time laid down by the Statute, *i.e.*, about thirteen and a half months after the close of the official year.

This number of the Statement is affiliated, in accordance with the Act, to the year 1911–12, but it aims also at bringing under review the progress made during the preceding nine years. Most of the reports used in the compilation of the Statement are for financial years, so that, as regards most sections, the period covered is the ten years ending on the 31st March 1912: but the reports of some departments of the administration are for calendar years, or for agricultural years ending in June or September, and a correspondingly different period is in these cases brought under review here.

In its general arrangement, the Statement follows in most respects the lines of the decennial Statement presented in 1903.

Comparison between the earlier and later years of the decade is in the present instance complicated, as regards Bengal and the neighbouring provinces, by the redistributions of territory effected in 1905 and 1912. Reports and figures for 1911–12 have in most cases been compiled for the provinces of Bengal, Bihar and Orissa, and Assam as they now exist, though these provinces were not actually brought into existence until the 1st April 1912. It will therefore be useful to bear in mind that the two new provinces of Bengal and Bihar and Orissa cover practically the same area, so far as British territory is concerned, as the single province of Bengal did in 1902.

For further statistical information, reference may be made to the Statistical Abstract relating to British India, published annually, which covers a period of 10 years. Mention may also be made here of the Memorandum on some of the results of Indian Administration during the past fifty years of British rule in India, published in 1909 [Cd. 4956].

Throughout this Statement, receipts and expenditure are shown in sterling, rupees being converted for the purpose at the rate of Rs. 15 = £1.

E 0.11 1000 7/13 E & S

TABLE OF CONTENTS.

	PAGE
I. INTRODUCTORY:	1–6
Special Events	1
Famine, Plague, and Natural Calamities	3
"Unrest"	4
II. AREA AND POPULATION:	7–13
Census Figures	7
Changes in Provincial boundaries	8
Transfer of the Capital to Delhi	*ib.*
The Provinces	9
III. THE FRONTIERS AND NATIVE STATES	14–50
The Frontiers and Frontier States:	
Baluchistan	18
The North-West Frontier	20
Kashmir	23
Nepal	24
Sikkim	25
Tibet	*ib.*
Bhutan	26
Assam Border Tribes	*ib.*
The North-Eastern Frontier	27
The Shan States	*ib.*
Aden and Perim	29
Internal States:	
Hyderabad	29
Mysore	30
Baroda	32
Rajputana	33
Central India	36
Madras States	38
Bombay States	40
Bengal, Bihar and Orissa, and Assam States	45
United Provinces States	46
Punjab States	48
Central Provinces States	49
IV. ADMINISTRATION:	51–68
The Secretary of State and Council of India	51
The Government of India	52
The Provincial Governments	53
The Legislative Councils	56
The Indian Councils Act, 1909	58
The New Councils	59
Special Methods of Legislation	62
District Administration	*ib.*
The Civil Services	64
Employment of Indians in the Public Service	66
The Decentralization Commission	*ib.*
Royal Commission on the Public Services in India	67
Holders of principal appointments during the decade	68
V. LAW AND LEGISLATION:	69–73
Acts of Parliament	70
Indian Legislation	71
VI. LITIGATION, CRIME, AND CRIMINAL JUSTICE:	74–88
The Courts:	74
Revenue Courts	77
Separation of Judicial and Executive Functions	*ib.*
Statistics of Civil Justice	*ib.*
Crime and Criminal Justice	81
"Political" Crime	83
The Finances of Law and Justice	88
VII. POLICE AND JAILS:	89–102
Police:	89
The Indian Police Commission	91
Jails:	99
Female and Juvenile Prisoners	100
Reformatory Schools	*ib.*
Transportation	101
VIII. LOCAL SELF-GOVERNMENT:	103–124
Municipalities:	104
The Presidency Towns	107
District Municipalities	111
District and Local Boards	117
Port Trusts	124
IX. PUBLIC HEALTH AND SANITATION:	125–144
Vital Statistics (General Population)	125
Malaria	127
Plague	129
Cholera	131
Small-pox and Vaccination	*ib.*
Health of the Troops	132
Health of the Jail Population	134
Medical Services and Institutions	135
Sanitation	138
Sanitary Administration	139
The progress of Sanitation	141
Bombay and Calcutta Improvement Trusts	*ib.*
X. FINANCE:	145–169
Provincial Settlements	145
Revenue and Expenditure	149
Heads of Revenue:	154
Incidence of, and changes in, Taxation	155
Heads of Expenditure	157
Home Charges	160
Capital Transactions and Debt	161
Liabilities and Assets	163
Capital Outlay on Public Works	*ib.*
Currency and Exchange:	164
The Gold Standard Reserve	*ib.*
Council Bills	165
Metallic Currency	166
Paper Currency	167
Banks	168
XI. LAND REVENUE AND TENURES:	170–189
Introductory:	
Zamindari and Ryotwari Tenures	170
Permanent and Temporary Settlements	*ib.*
The Cadastral Record and Record of Rights	172
The Assessment of the Land Revenue	*ib.*
Suspensions and Remissions	173
Incidence of the Land Revenue	174
Tenant-right	175
Revenue Surveys and Settlements and Land Records	*ib.*
Collection of the Land Revenue	179
Tenant-right and Land Legislation	183
Wards' and other Estates	188

PAGE

XII. REVENUE FROM OPIUM AND TAXATION: 190–222
- Opium: 190
  - Arrangements with China *ib.*
  - Production and Export 191
  - Revenue and Expenditure 192
  - Consumption in India 193
  - International Conferences 195
- Salt: *ib.*
  - Reductions of Duty 196
  - Sources of Salt *ib.*
  - Consumption and Incidence of Duty *ib.*
  - Retail Prices 197
  - Revenue and Expenditure 198
- Stamps 200
- Excise: 201
  - Intoxicating Liquors *ib.*
  - The Indian Excise Committee 202
  - Distillery Systems *ib.*
  - Taxation of Intoxicating Liquors 203
  - Consumption of Intoxicating Liquors 204
  - Retail Vend of Intoxicating Liquors 206
  - Local Advisory Committees *ib.*
  - Hemp Drugs 207
  - Total Number of Shops *ib.*
  - Revenue 208
- Provincial Rates 214
- Customs: 215
  - Tariff Legislation 216
  - Revenue *ib.*
- Income Tax: 217
  - The Income Tax Act of 1903 218
  - Revenue *ib.*
  - Incomes Assessed 219
- Registration: 220
  - Registration Law *ib.*
  - Statistics 221
  - Receipts and Charges 222

XIII. AGRICULTURE: 223–256
- Irrigation 224
- Canal Colonies *ib.*
- Principal Crops 226
- Season and Crop Reports 232
- Scarcity and Famine 234
- The Agricultural Departments 237
- Live Stock, Ploughs, and Carts 243
- The Civil Veterinary Department *ib.*
  - Horse, Mule, and Cattle Breeding 244
  - Horse and Cattle Disease 245
- Fisheries 247
- Agricultural Loans and Advances 248
- Co-operative Credit Societies 249

XIV. FORESTS: 257–264
- Extent and Nature of Forests 259
- Forest Protection 260
- Yield of the Forests 262
- Financial Results 263

XV. MINERAL PRODUCTION AND MINING: 265–271
- Mineral Production: 265
  - Coal 266
  - Gold 267
  - Petroleum *ib.*
  - Manganese, Iron, &c. 268
- Regulation and Inspection 270

XVI. INDUSTRIES AND MANUFACTURES: 272–284
- Government and Industrial Development 272
- Indigenous Industries 273
- Industries connected with Agriculture 276
- Other large Industries: 277
  - The Tata Iron and Steel Works 281
- Factory Legislation and Inspection 282
- Inventions and Designs 284

XVII. TRADE AND COMMERCE: 285–298
- The Department of Commerce and Industry 285
- Total Foreign Trade 286

PAGE

XVII. TRADE AND COMMERCE—*cont.*
- Sea-borne Trade: 286
  - Imports of Private Merchandise *ib.*
  - Exports of Private Merchandise 290
  - Trade with different Countries 293
  - Government Stores *ib.*
  - Movements of Treasure *ib.*
- Ports, Shipping, and Freights 294
- Land Frontier Trade 295
- Internal and Coasting Trade 296
- Joint Stock Companies 297

XVIII. POST OFFICE AND TELEGRAPHS: 299–306
- Post Office: 299
  - Expansion of System and Business *ib.*
  - Reductions in Rates of Postage 301
  - Financial Results *ib.*
  - Savings Banks 302
- Indian Telegraph Department: 303
  - Expansion of System and Traffic *ib.*
  - Reductions in Rates 304
  - Financial Results 305
  - Wireless Telegraphy *ib.*
  - Telephones *ib.*
- Indo-European Telegraph Department 306
- Total Financial Results of Telegraphs *ib.*

XIX. PUBLIC WORKS: 307–325
- Introductory: 307
  - Strength of Public Works Department 308
- Railways: *ib.*
  - Ownership and working *ib.*
  - The Railway Board 310
  - Working during the Decade *ib.*
  - Extension of System 311
  - Capital Expenditure *ib.*
  - Passenger and Goods Traffic 312
  - Staff and Strikes *ib.*
  - Accidents 313
  - Financial Results *ib.*
- Irrigation: 314
  - The Irrigation Commission 315
  - Working during the Decade *ib.*
  - Navigation Canals 316
  - Irrigation Revenue *ib.*
  - Financial Results *ib.*
- Buildings and Roads 324

XX. ARMY AND MARINE: 326–334
- Administration 326
- Total Expenditure *ib.*
- Army Services: 327
  - Strength of the Army 328
  - Reorganisation, Redistribution, and Rearmament 330
  - Improvements in Pay and Conditions 331
  - Military Operations 332
  - Inquiry into Military Requirements and Expenditure 333
- Military Works and Special Defences *ib.*
- Marine Services *ib.*

XXI. SCIENTIFIC AND MISCELLANEOUS DEPARTMENTS: 335–339
- Board of Scientific Advice 335
- Survey of India *ib.*
- Geological Survey Department 336
- Botanical and Zoological Surveys 337
- Marine Survey *ib.*
- Meteorological Department *ib.*
- Archæological Survey Department 338
- Linguistic and Ethnographical Surveys 339

XXII. EDUCATION, LITERATURE, AND THE PRESS: 340–365
- Education: 340
  - General Statistics 342
  - Primary Education 345
  - Secondary Education 346
  - Special Schools 349
  - Collegiate Education *ib.*
    - The Universities Commission and Universities Act *ib.*

PAGE

XXII. EDUCATION, &c.—*cont.*

Technical and Professional Education - 352
The Training of Teachers - 355
Female Education - 356
Classification of Scholars by Race and Creed - *ib.*
Moral and Physical Training, Hostels, &c. - 358
Fees and Scholarships - 359
Expenditure - *ib.*
Management - 361
The Educational Services - *ib.*
Indian Students in England - 362
Literature and the Press: - *ib.*
The Indian Press Act - 363
Publications of 1911 - 364

XXIII. PRICES AND WAGES, MIGRATION AND EMIGRATION: - 366–375

Prices - 366
Wages - 368
Internal Migration: - 369
Labour Immigration into Assam - *ib.*
Emigration: - 372
Regulated Emigration - *ib.*
Non-regulated Emigration - 374

XXIV. CONDITION OF THE PEOPLE: - 376–423

Bengal and Bihar and Orissa - 376
Assam - 381

PAGE

XXIV. CONDITION OF THE PEOPLE—*cont.*

United Provinces - 386
Punjab - 390
North-West Frontier Province - 397
Central Provinces and Berar - 400
Burma - 406
Baluchistan - 409
Ajmer-Merwara - 414
Coorg - 416
Madras - 417
Bombay - 421

MAPS, &c.

Facing page

Redistributions of territory effected in 1905 and 1912 - 8
The Province of Delhi - 13
India, showing Railways - 311
Diagram showing Mileage of Railways open, and Financial Results, for each year since 1853 - 312

APPENDICES.

PAGE

I. List of Indian Official Reports, &c. - 424
II. Indian Currency and Weights and Measures - 426
III. The Royal Commission on Indian Finance and Currency - 427

STATEMENT

EXHIBITING THE

MORAL AND MATERIAL PROGRESS AND CONDITION OF INDIA

During the Year 1911-12 and the Nine preceding Years.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

CHAPTER I.

INTRODUCTORY.

The period with which this Statement deals was distinguished by events, outside the ordinary course of administration, that will stand as landmarks in the history of India. Its first year saw the great ceremonial of the Delhi Durbar of the 1st January 1903, its last the unique event of the visit to India of the King-Emperor and Queen-Empress, in fulfilment of His Majesty's wish to announce his coronation in person to the people of India. Delhi was again the scene of the great Durbar, held on the 12th December 1911. Memorable events of the intervening years were the first visit of Their Majesties, as Prince and Princess of Wales, in 1905–06, and the Proclamation of the King-Emperor to the Princes and Peoples of India on the 2nd November 1908, the 50th anniversary of the transfer of the government of India to the Crown.

It would be out of place here to refer in detail to these events, whose outstanding importance needs no emphasis. For the purposes of a brief review, they may be noticed in the order of their occurrence.

The Durbar of the 1st January 1903 was held in honour of the coronation of the King-Emperor, which took place at Westminster on the 9th August 1902. The Royal Family was represented at Delhi by Their Royal Highnesses the Duke and Duchess of Connaught, and there were assembled there the principal ruling chiefs of India, many representatives of foreign Powers, the leading officials of Government, and a strong force from the Indian Army. Besides the Durbar itself, the celebrations included a grand review of the whole body of troops assembled, a State ball, and other imposing ceremonies. Apart from official functions, the public rejoicings assumed various forms; on the day of the Durbar, local celebrations were held everywhere throughout the country. The departure from Delhi on the 10th January of the Viceroy and the Duke and Duchess of Connaught brought to an end what the Government of India described at the time as "the most imposing ceremony, or rather series of ceremonies, "that has ever been held in India in British or, perhaps, in any times." The auspicious occasion was marked by the release of a large number of prisoners from Indian jails, and by the announcement of numerous honours, favours, and concessions. A short account of the Durbar was presented to Parliament in 1903,* and a full official history was subsequently published.

The outstanding event of the year 1905–06 was the first visit af the King-Emperor and Queen-Empress, then Prince and Princess of Wales. Their Royal Highnesses arrived at Bombay on Thursday, November 9th, 1905. A comprehensive tour of the Empire extending over four months had been arranged, and was successfully carried out, Their Royal Highnesses being received everywhere with loyalty and enthusiasm. The chief public events of the tour were a review of the troops near Rawal Pindi, the

* Cd. 1644.

(Introductory.)

Proclamation Parade at Calcutta on January 1st, the opening of Victoria Memorial Park at Rangoon, and the unveiling of statues of Queen Victoria at Bangalore and Karachi. Their Royal Highnesses sailed for England from Karachi on Monday, March 19th, 1906.

The Proclamation of the King-Emperor to the Princes and Peoples of India on the occasion of the fiftieth anniversary of the transfer of the government of India to the Crown* was read by His Excellency the Viceroy in Durbar at Jodhpur on the 2nd November 1908. It may be permitted to quote here a passage surveying from the broadest point of view a long term of years of which the conclusion and continuation are represented by the decade with which this Statement is concerned :—

"Half a century is but a brief span in your long annals, yet this half century that ends to-day will stand amid the floods of your historic ages, a far-shining landmark. The proclamation of the direct supremacy of the Crown sealed the unity of Indian government and opened a new era. The journey was arduous, and the advance may have sometimes seemed slow ; but the incorporation of many strangely-diversified communities, and of some three hundred millions of the human race, under British guidance and control has proceeded steadfastly and without pause. We survey our labours of the past half century with clear gaze and good conscience.

"Difficulties such as attend all human rule in every age and place have risen up from day to day. They have been faced by the servants of the British Crown with toil and courage and patience, with deep counsel and a resolution that has never faltered nor shaken. If errors have occurred, the agents of my Government have spared no pains and no self-sacrifice to correct them ; if abuses have been proved, vigorous hands have laboured to apply a remedy."

The intention in pursuance of which the King-Emperor and Queen-Empress visited India in 1911–12 was announced in His Majesty's Speech to Parliament on the 6th February 1911. Their Majesties embarked at Portsmouth on the 11th November 1911 and arrived at Bombay on the 2nd December. During a short stay at Bombay, Their Majesties attended a children's fête, at which some 26,000 children were present.

Their Majesties arrived at Delhi on the 7th December. The Coronation Durbar was held on the 12th of that month. The King-Emperor's opening announcement† was followed by the rendering of homage by the Governor-General and the high officials and ruling chiefs from all parts of India. Subsequently the Governor-General announced on behalf of the King-Emperor "the grants, concessions, reliefs, and "benefactions which His Imperial Majesty has been graciously pleased to bestow "upon this glorious and memorable occasion." These included the promise of large grants of money for "the promotion of truly popular education" ; the award of half a month's pay of rank to non-commissioned officers and men of the Army in India, the Royal Indian Marine, and minor civil officials ; a declaration that Indian troops should in future be eligible for the grant of the Victoria Cross ; and an announcement that certain prisoners convicted of crime would be released, and that all civil debtors then in prison whose debts were small and due to real poverty would be discharged and their debts paid. The Durbar was brought to a close by the announcement of the King-Emperor of the transfer of the seat of the Government of India from Calcutta to Delhi, the creation of a Governorship for the presidency of Bengal and of the new Lieutenant-Governorship of Bihar and Orissa, and the restoration of the Chief Commissionership of Assam.

Among the other ceremonies and festivities at Delhi, which included a grand review of nearly 50,000 troops, not the least impressive were religious services of Hindus, Muhammadans, and Sikhs, culminating in a joint gathering in which all present offered up united thanksgivings for the success of the great solemnity of the Coronation and prayers for the King-Emperor and the Royal Family, and a great festival, on the 13th December, when it was estimated that half a million people came together for the purpose of defiling past the King-Emperor and Queen-Empress, who surveyed the scene from the walls of the Fort, crowned and in their robes of State.

Their Majesties left Delhi on the 16th December, and arrived at Calcutta on the

* Published as Parliamentary Paper No. 324 of 1908.

† The announcements made by and on behalf of the King-Emperor at the Durbar are printed in Parliamentary Paper Cd. 5979 of 1911.

30th December. In the interval the King enjoyed ten days' shooting in Nepal, while the Queen visited Agra and some of the States of Rajputana.

At Calcutta Their Majesties attended the Proclamation Parade and a pageant on the Maidan.

Leaving Calcutta on the 8th January 1912, Their Majesties re-embarked at Bombay on the 10th January, and landed at Portsmouth on the 5th February.

Throughout their visit Their Majesties were received with every manifestation of loyalty and popular devotion. The King-Emperor expressed, in his last speech before leaving India, his intense satisfaction at the way in which all classes and creeds had joined together in the true-hearted welcome so universally accorded.

In concluding this very brief account of a historic tour, it will, perhaps, not be out of place to reproduce in full the striking message sent by the Princes and people of India, through the Prime Minister, on the day of the King's return to England, to the people of Great Britain and Ireland:—

"The Princes and people of India," it ran, "desire to take the opportunity afforded by the conclusion of the Royal visit to convey to the great English nation an expression of their cordial goodwill and fellowship; also an assurance of their warm attachment to the world-wide Empire of which they form a part, and with which their destinies are now indissolubly linked."

"Their Imperial Majesties' visit to India, so happily conceived and successfully completed, has produced a profound and ineffaceable impression throughout the country. Their Imperial Majesties, by their gracious demeanour, their unfailing sympathy, and their deep solicitude for the welfare of all classes, have drawn closer the bonds that unite England and India, and have deepened and intensified the traditional feeling of loyalty and devotion to the Throne and person of the Sovereign which has always characterised the Indian people.

"Conscious of the many blessings which India has derived from the connection with England, the Princes and people rejoiced to tender in person their loyal and loving homage to Their Imperial Majesties. They are confident that this great and historic event marks the beginning of a new era, ensuring greater happiness, prosperity and progress to the people of India under the ægis of the Crown."

An official history of the Royal visit is being prepared.

Famine, Plague, and Natural Calamities.

The second half of the Introductory Chapter of the last decennial number of this Statement was devoted, in view of the "unexampled series of calamities" that marked the decade 1892–93 to 1901–02 and their dominating influence, to a review of the visitations of famine and plague, and an account of the natural calamities of the decade, which included the Assam earthquake and Chittagong cyclone of 1897. As regards famine, India was more fortunate during the period now under review. Local scarcity, necessitating in some cases the declaration of "famine," prevailed from time to time in different parts of the country, and famine relief operations on a large scale were necessary in the United Provinces in 1907–08; but there was no such widespread failure of crops as caused the great famines of 1896–97 and 1899–1900. Plague, on the other hand, unhappily continued its ravages; but, although a very serious, it was not, as it was in the preceding decade, a new element in the situation. The subject of plague is in this Statement dealt with in the chapter on Public Health and Sanitation, and that of scarcity and famine in the chapter on Agriculture.

It remains to deal here with the natural calamities of the decade, other than failures of the rains. Of these by far the most serious was the disastrous earthquake that occurred in the Punjab on the 4th April 1905, with the Kangra district, in the Himalayan region, as its starting point. Beginning at an early hour of the morning, when many people were still asleep, the more violent phases of the shock dealt summary destruction to life and property in the neighbourhood of the Kangra valley and Dharmsala, caused very great damage and considerable loss of life in the hilly tracts of Mandi State and Kulu, and did serious damage to Dehra Dun, Mussoorie, Chakrata, and other towns in the vicinity, and slight damage to the large towns of Lahore, Amritsar, Jullundur, Saharanpur, and others similarly placed with reference to the centre. Outside this area the earthquake was felt with continually diminished intensity. It was registered by seismological instruments situated so far from the

base as Europe and America. In the area of Kangra and Kulu it was estimated that about 20,000 human lives were lost, 100,000 houses destroyed, and 13,300 plough cattle and 39,800 other animals killed. Nearly every building within an area of 700 square miles was levelled to the ground. Among the killed were 25 out of the 76 European inhabitants of Dharmsala, including nearly the whole civil staff, and 112 of the 7th Gurkhas. No time was lost in pushing up relief parties from the plains, and in a week medical relief stations had been established at five centres; in a fortnight the treasuries were opened, and the machinery of Government was once more in motion. For the relief of distress consequent on the destruction of property generous provision was made by Government; revenue and taxation were remitted, irrigation channels repaired, and grants of timber for the rebuilding of houses and liberal advances of money were made. At the same time private charity contributed over £90,000 for the relief of distress which lay beyond the province of Government to provide for.

The earthquake was somewhat less intense than the Assam earthquake of 1897; but the loss of life was more than ten times as great.

Different parts of the country suffered from time to time from floods and cyclonic storms, but none of these local calamities were of outstanding magnitude. In June 1902 a cyclonic storm caused much damage to property and some loss of life in the Karachi district, and the port of Akyab suffered a similar experience in November 1908. Two severe storms occurred in October 1909; the first, passing from the Bay of Bengal into Eastern Bengal, was most severely felt in the Bakarganj district, where 172 human beings and over 15,000 cattle were reported to have perished; the second was responsible for the loss of 62 lives and damage to property estimated at £100,000 in the Ganjam district of Madras. Floods were responsible for 98 deaths and much damage to property in the Guntur district of Madras in December 1906, for 21 deaths and the destruction of the rice crops over large areas in Orissa in August 1907, and for 57 deaths in the Karachi district in July 1908. The list might be amplified, but most of the other occurrences coming under this head were of relatively small importance.

"Unrest."

Before concluding this introductory chapter, something must be said of the various connected tendencies and developments referred to comprehensively under the now familiar phrase "unrest in India," which probably in the general estimation constitute collectively the distinctive feature of the period covered by this Statement.

To the word "unrest" as here used no precise or limited meaning can be attached. It has always been recognised that the manifestations of unrest have included, besides elements due to seditious or anarchical agitation, other elements arising out of the natural aspirations of the educated classes. On the one hand, excesses, leading in many cases to violent crime, have called for repressive measures; on the other, it has been the aim of Government to encourage healthy growth, and to satisfy as far as possible legitimate hopes.

In so far as "unrest" has found definite expression in action, or has led to action on the part of Government, its main aspects will fall within the scope of subsequent chapters of this Statement, and it is not proposed to attempt here a treatment of the subject going beyond actual events into the speculative questions of past causes and future developments. It must suffice to review some of the outstanding facts very briefly.

To look first at the brighter side of the picture, there has been noticeable in recent years a certain quickening of interest, among the more educated classes in India, in questions affecting the public welfare—not only in political questions in the narrower sense, but also in questions regarding such subjects as education, sanitation, and the development of Indian industries. With this has gone a desire to take a larger share in shaping the policy of government and in the work of administration. The momentous changes in the constitution and functions of the legislative councils introduced under the Indian Councils Act of 1909 had their origin in a recognition of these aspirations, and a desire to entrust to the leaders of the Indian peoples a greater share in legislation and government and wider opportunities of expressing their views on administrative measures. In other directions also similar steps have been taken. Indian gentlemen have been appointed for the first time to the Council of the Secretary of State, and to the Executive Councils in India; Indians have been

employed in increasing numbers in other important posts; and, in the sphere of local government, the independent powers of local bodies have been enlarged, and endeavours have been made to render them effective as instruments of political and popular education. Mention may be made also of the increasing number of conferences, at which non-officials meet with officials to discuss schemes of educational, sanitary, or other advancement.

But it is not to any healthy symptoms of developing political consciousness or capacity that the word "unrest" owes its prominence in recent discussions of Indian affairs. At the other end of the scale the manifestations of unrest have included agitation and conspiracy leading direct to violent crime and anarchical outrages. It would serve no useful purpose to follow in detail the history of seditious agitation and of crime following in its wake. Some details are given elsewhere, with an account of the measures taken by Government to deal with the situation.*

It is unnecessary, for the purposes of a brief review, to go back before the year 1905, though the seeds of mischief had been sown, and revolutionary organisations were in existence, long before that time. The "partition" of Bengal, while it could not properly be regarded as originating the agitation that reached its height in the next two or three years, no doubt brought to the front men who would otherwise have held aloof, and afforded an opportunity for the development of schemes previously conceived. A campaign of seditious speaking was opened in Eastern Bengal in 1905, and many meetings were held subsequently in various parts. In 1907 matters reached a climax. In Eastern Bengal, a flood of oratory, inculcating among other things the boycott of imported goods, culminated in serious riots and widespread lawlessness. In Madras the passage through the Presidency of a political agitator from Bengal was followed by a revolt of the students of Rajahmundry College against the college authorities, and an attack by a mob on the European club at Cocanada, resulting in considerable damage. In the Punjab (where the prevalence of plague, high prices, and agitation against certain measures of Government, including the Colonization Bill, were all regarded as contributory factors) unrest manifested itself in riots at Lahore and Rawal Pindi, in seditious articles in certain newspapers, and in more overt acts calculated to discredit Government, such as the fouling of wells. The connection between violent speaking and violent action became so obvious that Government could no longer afford to overlook it, and the Regulation of Meetings Ordinance was issued.

The serious outbreak of political crime in Bengal and Eastern Bengal in 1908, and the Acts passed by the legislature in that year, one of which constituted the first much needed step towards dealing with inflammatory newspaper articles, are referred to in other chapters. The same year was marked in Bombay by a strike of mill operatives fomented as a protest against the arrest and conviction for sedition of the editor of a local newspaper.

In Eastern Bengal the worst phases of unrest were especially prominent; from 1907 onwards seditious and criminal societies were established; the boycott was enforced by the most violent measures; subsidies were levied by threats from well-to-do people; dacoities were committed in order to secure funds; and assassinations were planned and executed.

In 1909 the toll of valuable lives was heavy. The effects of the anarchical movement were seen in this country in the assassination of Sir Curzon Wyllie and Dr. Lalkaka in July. In India an attempt on Lord Minto's life at Ahmedabad in November was followed by the murder in the following month of Mr. Jackson, Collector of Nasik.

The same year saw the first appearance in Madras of the anarchist's bomb. The movement in that Presidency, fed by mischievous and inflammatory writings in the public press, culminated in June 1911 in another grievous crime—the murder in Tinnevelly of Mr. Ashe, the Collector of the district.

Since the end of the period covered by this Statement, the continued existence of an anarchical element has been shown by the outrage on the occasion of the State entry of the Viceroy into Delhi on the 23rd December, 1912, the details of which are fresh in all memories.

---

* *See* pages 83 and 362.

(Introductory.)

One of the most lamentable features of the seditious and anarchical movements has been the way in which immature minds have been perverted by the teaching of agitators, and young men, or mere boys, often the sons of respectable parents, have been made use of to carry into effect criminal schemes.

Various influences have contributed in the last few years to bring about an improvement in the situation in India, while the wider opening of public careers to Indians has revealed a sharp division between moderate and extremist politicians who to a certain extent had previously co-operated in political movements.

CHAPTER II.

AREA AND POPULATION.

The British Empire in India falls politically into two great divisions, the Provinces and the Native States. The former, which make up what is known as British India, consist of the territory immediately under the administration of the Crown; the latter include nearly 700 units of all degrees of importance, each under its own chief, but all acknowledging the suzerainty of the Paramount Power.

The total area, according to the latest figures available, is about 1,833,000 square miles. The total population, according to the census taken on the 10th March 1911, is over 315 millions. The distribution between British India and the Native States is shown in the margin. The latter, it will be seen, contain rather less than a fourth of the total population on nearly two-fifths of the total area, the average density of the population being more than twice as great in British India. This disproportion is partly due to the large tracts of thinly populated country included in Kashmir, Baluchistan, Western Rajputana, and the hills of Central India and south-western Bengal.

—	Total Area.	Population of Area covered by Census.
	Square Miles.	
British India -	1,124,000	244,267,542
Native States -	709,000	70,888,854

The final report on the census of 1911 is not yet available. The table below gives some of the principal figures:—

	Area covered by Census.	Total Population.			Number of Females per 1,000 Males.	Percentage of Total Population.				
		1911.	Variation per Cent. in Ten Years 1901–11.	Average Density per Square Mile.		Urban Population.	Hindus.	Muhammadans.	Buddhists.	Christians.
Provinces:	Sq. Miles.									
Ajmer-Merwara	2,711	501,395	+ 5·1	185	884	28·0	77·7	16·2	—	1·1
Andamans and Nicobars	3,143	26,459	+ 7·3	8	352	—	35·9	17·3	6·1	2·1
Assam	53,015	6,713,635	+ 14·9	127	936	2·0	54·2	28·1	·2	1·0
Baluchistan	54,228	414,412	+ 8·5	8	734	12·0	6·2	91·1	—	1·2
Bengal	78,699	45,483,077	+ 7·9	578	947	6·5	44·8	52·7	·5	·3
Bihar and Orissa	83,181	34,490,084	+ 3·7	415	1,046	3·7	82·2	10·6	—	·7
Bombay (including Aden)	123,059	19,672,642	+ 6·0	160	920	19·0	75·9	20·5	—	1·2
Burma (including Shan States, &c.)	230,839	12,115,217	+ 14·4†	53	959	9·3	3·2	3·5	89·7	1·7
Central Provinces and Berar	99,823	13,916,308	+ 16·2	139	1,008	8·4	82·6	4·1	—	·2
Coorg	1,582	174,976	— 3·1	111	799	5·7	79·4	7·5	—	2·0
Madras	142,330	41,405,404	+ 8·3	291	1,031	11·8	88·9	6·6	—	2·9
N.W. Frontier Province (*Districts*)	13,418	2,196,933	+ 7·6	164	858	13·3	5·5	92·9	—	·3
Punjab (including Delhi)	99,779	19,974,956	— 1·7	200	817	11·1	33·5	54·8	—	1·0
United Provinces	107,267	47,182,044	— 1·1	440	915	10·2	85·3	14·1	—	·4
Total, British Territory	1,093,074	244,267,542	+ 5·5	223	956	*	67·0	23·5	4·4	1·0
States and Agencies:										
Assam State (Manipur)	8,456	346,222	+ 21·7	41	1,029	21·6	58·2	4·2	—	—
Baluchistan States	80,410	420,291	— 1·9	5	850	2·4	2·8	96·5	—	—
Baroda	8,182	2,032,798	+ 4·1	248	925	19·9	83·5	7·9	—	·3
Bengal States	5,393	822,565	+ 11·1	153	877	2·7	69·0	30·1	·7	—
Bihar and Orissa States	28,648	3,945,209	+ 19·0	138	1,018	·9	85·9	·4	—	1·0
Bombay States	63,864	7,411,675	+ 7·3	116	968	15·7	81·7	11·8	—	·2
Central India Agency	77,367	9,356,980	+ 10·1	121	949	8·4	88·3	5·5	—	·1
Central Provinces States	31,174	2,117,002	+ 29·8	68	1,009	1·7	61·9	·9	—	1·8
Hyderabad	82,698	13,374,676	+ 20·0	162	968	*	86·9	10·3	—	·4
Kashmir	84,432	3,158,126	+ 8·7	37	887	9·5	21·9	75·9	1·2	—
Madras States (including Travancore and Cochin)	10,084	4,811,841	+ 14·9	477	995	*	69·0	6·5	—	24·0
Mysore	29,475	5,806,193	+ 4·8	197	979	11·3	92·0	5·4	—	1·0
N.W. Frontier Province (*Agencies and Tribal Areas*)	25,500	1,622,094	—	63	875	—	‡	‡	‡	‡
Punjab States	36,551	4,212,794	— 4·8	115	814	8·4	49·6	31·3	·1	—
Rajputana Agency	128,987	10,530,432	+ 6·9	82	908	12·7	83·1	9·4	—	—
Sikkim	2,818	87,920	+ 49·0	31	952	—	66·8	—	32·9	·3
United Provinces States§	5,079	832,036	+ 3·7	164	929	10·8	70·1	29·6	—	·2
Total, Native States	709,118	70,888,854	+ 12·9	100	944	*	77·9	13·3	·1	2·0
Grand Total, India	1,802,192	315,156,396	+ 7·1	175	953	*	69·4	21·2	3·4	1·2

* Figures not at present available. † Corrected increase over identical areas.
‡ No figures available. The bulk of the population are Muhammadans. § Excluding Benares.

(Area and Population.)

The census of 1911 included within its scope, besides the Agencies and tribal areas of the North-West Frontier Province, the whole of Baluchistan and several remote tracts in Burma that had not previously been dealt with; but the area covered by the census was still considerably less than the total area of the Empire, some 31,000 square miles of unadministered territory in Burma being excluded.

The total increase in recorded population between 1901 and 1911 was 20,795,000, or 7·1 per cent., as compared with 7,046,000, or 2·5 per cent., and 33,418,000, or 13·2 per cent., in the two preceding inter-censal periods. Towards this increase British provinces contributed 12,662,000 and Native States 8,133,000, the respective rates of increase being 5·5 and 12·9 per cent. To the extent of 1,754,000 the increase was due to the inclusion of new areas within the scope of the census operations, the greater part of this addition being accounted for by the estimated population of the Agencies and tribal areas in the North-West Frontier Province (included in the figures for Native States). All provinces and states showed an increase, except the Punjab, United Provinces, and Coorg, and the Punjab and Baluchistan native states.

The figures given above do not include the population of the French and Portuguese settlements in India, the totals for which are, respectively, about 282,000 and 605,000.

Changes in Provincial Boundaries and transfer of the Capital to Delhi.—The table above shows the Indian provinces as they now exist, except that the figures for the new province of Delhi are included in those for the Punjab. The existing provinces of Bengal, Bihar and Orissa, and Assam date, however, only from the 1st April 1912, the day following the expiration of the period with which this Statement deals. Their proposed creation was announced at the Coronation Durbar held at Delhi on the 12th December 1911, together with the decision to transfer the seat of the Government of India from Calcutta to Delhi. The province of Delhi, which consists only of a small *enclave* in the Punjab including the city of Delhi, was constituted subsequently, with effect from the 1st October 1912.

The territories principally affected by the changes made in 1912 were the same as were concerned in the earlier redistribution, taking effect from the 16th October 1905, that came to be known as the "partition" of Bengal.

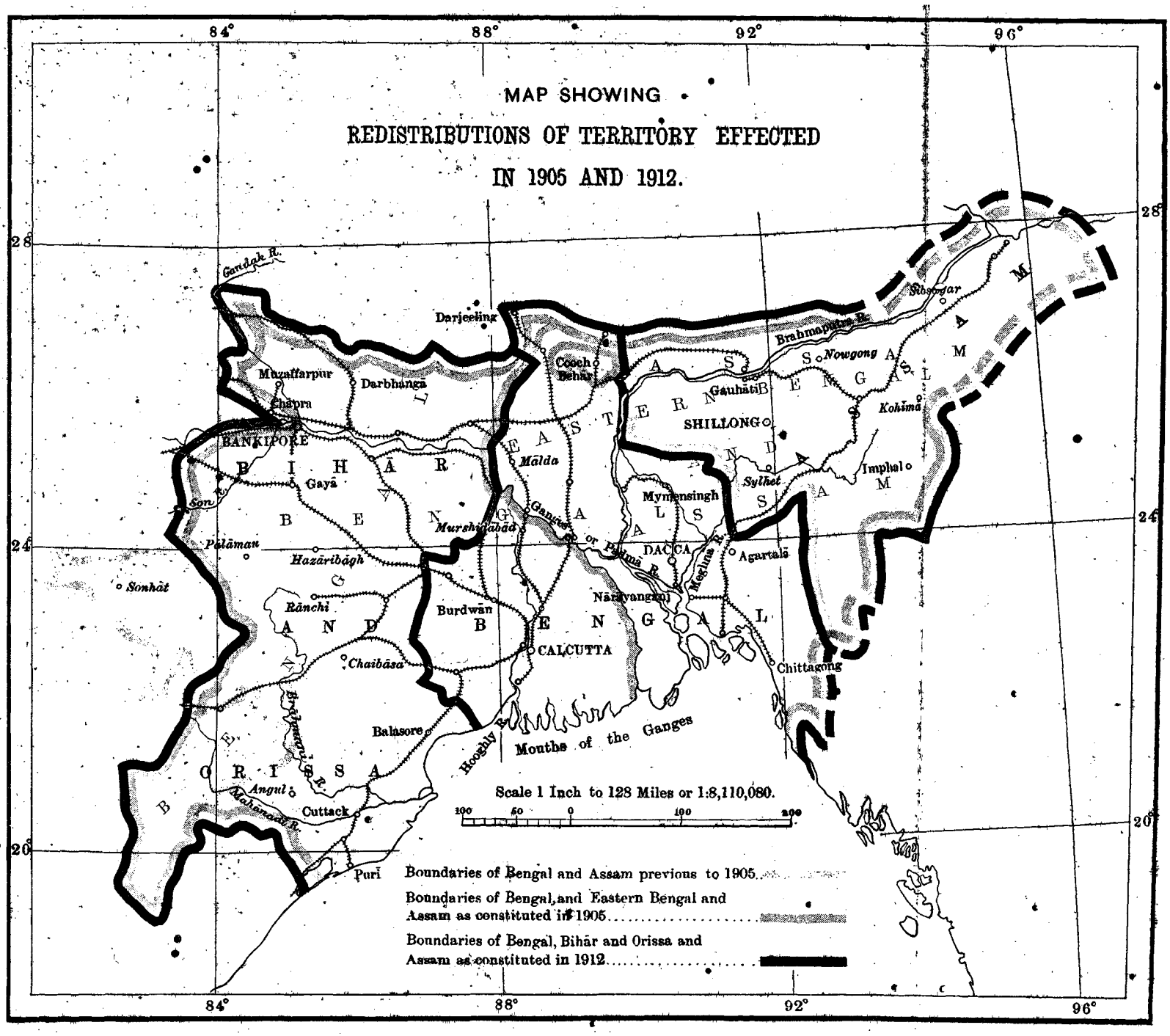
The changes made in the provincial boundaries in 1905 and 1912 are shown by the map opposite, and it is unnecessary here to refer to them in detail. Full papers were laid before Parliament [Cd. 2658 and 2746 of 1905, 5979 of 1911, and 6189 of 1912].

Early in the decade the Government of India, whose attention had been called to the matter by the constantly accumulating evidence of the excessive burden placed upon the Bengal Government by a charge too great for any one administration, addressed the local Governments on the question of reducing this charge by a redistribution of territory. In accordance with the decision finally arrived at, the eastern portion (roughly about a quarter of the total area) of the province of Bengal was in 1905 separated from the rest of Bengal and united with Assam to form the new province of Eastern Bengal and Assam. At the same time extensive changes, affecting mainly native state territories, were made on the western borders of Bengal. The greater part of the district of Sambalpur and five Uriya-speaking states were detached from the Central Provinces and added to the Orissa division, while in return Bengal transferred to the Central Provinces five native states forming a solid block of territory with a Hindi-speaking population.

The changes made in 1912 reconstituted the old province of Assam, cut off, roughly speaking, the western half of the old province of Bengal to form the province of Bihar and Orissa, and reunited Eastern Bengal with the comparatively small area round Calcutta which alone has formed part of "Bengal" throughout these changes to form a new province under that name. The existing province of Bengal thus represents approximately the eastern half of Bengal as it was before 1905, and is considerably smaller than the Bengal of the years 1905–12.

The only change of any importance in the provincial boundaries during the decade, apart from those mentioned above, was the transfer of some 600 square miles,

MAP SHOWING
REDISTRIBUTIONS OF TERRITORY EFFECTED
IN 1905 AND 1912.



mostly consisting of Government forests, from the Central Provinces to Madras in 1909.

The steps taken, in pursuance of the announcement by the King-Emperor at the Delhi Durbar, towards the establishment of the new capital at Delhi do not fall within the scope of this Statement. The site chosen for the new city is shown in the map of the province facing page 13.

Some brief notes on the separate provinces as now defined, having reference mainly to their physical features, are added below.

Madras.—The Madras Presidency, or Presidency of Fort St. George, occupies the southern portion of the peninsula, running up to meet the new province of Bihar and Orissa in the north-east. The irregular northern boundary has been formed by accidents of history; on the other sides, the Presidency is bounded by the sea. For administrative purposes the Amini Divi and Laccadive Islands form part of the Presidency. From a physical point of view Madras may be roughly divided into three portions, the long and broad eastern coast region, the shorter and narrower western coast region, and the high tableland in the interior. These divisions are determined by the two great mountain ranges of the Eastern and Western Ghats, the latter being the more elevated and the nearer to the sea. The country, generally speaking, slopes gradually from the eastern base of the western mountain chain down to the eastern or Coromandel coast, while on the western side the fall is sudden and precipitous. The western hills have the effect of arresting the lower strata of rain clouds brought up from the Indian Ocean by the south-west monsoon, and of causing excessive rain precipitation on the narrow strip of coast on the western side of the peninsula. The heaviest rainfall of the southern portions of the east coast, on the other hand, occurs during the period of the north-east monsoon. The climate thus varies considerably in the different parts of the Presidency. The west or Malabar coast region, lying between the Indian Ocean and the Western Ghats, is some 30 or 40 miles broad; copiously supplied with moisture, and with a rugged, rocky, and irregular surface, the land may be rendered highly productive with careful cultivation, which is generally bestowed. Rice, pepper, and spices are important crops; the upper districts abound with fine timber. The southern portion of the west coast is occupied by the native states of Travancore and Cochin. After turning Cape Comorin the extensive territory to which Europeans have given the name of the Carnatic is reached. It stretches about 500 miles along the coast, nearly to the River Kistna. The mountains are here further from the sea, and in most places naked and rocky. The region is watered by several great rivers, but contains large arid plains, to which the industrious husbandman can with difficulty convey the necessary moisture with the aid of canals and tanks. In seasons of drought, the Carnatic is subject to severe famines; but, though there are many barren tracts, the country on the whole is highly cultivated and very productive. Inland, behind the Carnatic, lie the Ceded Districts, made over to the British by the Nizam of Hyderabad in 1800. The character of the country is similar to that of the Deccan plateau. The westerly parts are highlands throughout. Towards the centre the plateau presents a monotonous and almost treeless extent; water is scarce, and fodder difficult to procure. Between the Carnatic and the boundary of Bihar and Orissa lies the tract known as the Northern Circars. The littoral is fertile, and has industries of some importance. The rugged interior of the country, formed by a portion of the Eastern Ghats, is covered with inhospitable jungle, and inhabited by primitive forest tribes; in this area, which constitutes what are commonly known as the Agencies or Agency tracts, the ordinary law of the land is in force only to a limited extent. The population per square mile of total area ranges from 634 in Tanjore to 56 in the Godavari Agency.

Bombay.—The chief natural divisions of the Bombay Presidency (leaving out of account the outlying settlement of Aden) are Sind, the island of Cutch, the peninsula of Kathiawar, the great plain of Gujarat between the mouth of the Luni and the western outposts of the Satpuras, the valley of the Tapti (Surat and Khandesh), the tableland of the Deccan, east of the Ghats, and the Konkan or strip of littoral between the Ghats and the sea. Sind, or the lower valley of the Indus, is cut off from the rest of the Presidency by deserts or sea, and differs widely in physical features and climate, as well as in the language, dress, and customs of the people. The climate of Sind is among the hottest and most variable in India; the rainfall is

scanty and irregular, and cultivation is dependent upon artificial irrigation. Except where the waters of the Indus have been made available, the country is flat and arid; on the east the Registan or Thar desert stretches into Rajputana. Cutch and Kathiawar are occupied by native states. A great part of Gujarat also belongs to Baroda and other native states; the central region has one of the richest soils in India, and is densely populated. There are rich lands also along the Tapti Valley in Surat and Khandesh, as well as important forests. The Deccan includes on the west a rough and rocky region, which passes gradually into the broad, flat, black-soil plain of the Central Deccan, extending eastwards far into the Nizam's territory; protected by the hills from the south-west monsoon, which at times surmounts their crests only to hurl its heavy clouds across the continent leaving the land unwatered and untilled, the Deccan, generally speaking, yields to much labour a bare measure of subsistence. The Konkan, on the other hand, receives a copious and never-failing supply of rain from the south-west monsoon; rice is the most important crop, and the great plantations of palms that rise along the coast are an important source of wealth. South of the Deccan three inland districts form the Bombay Carnatic or Southern Maratha country; they enjoy a better water-supply than the Deccan plain, and consist of sweeping forest and well-watered fields. In British territory the density of population varies from 433 persons to the square mile in Kaira to 33 in Thar and Parkar, and in Native States from 450 in Sachin to 25 in the Khandesh Agency.

Bengal.—The Presidency of Bengal, as constituted with effect from the 1st April 1912, comprises the lower valleys and deltas of the Ganges and the Brahmaputra, and, with the exception of the Himalayan montane and sub-montane tracts in Darjeeling and Jalpaiguri in the north, the hills in Hill Tippera and Chittagong, and the Chittagong Hill Tracts in the extreme south-east, consists largely of a vast fertile alluvial plain intersected in its southern portion by an infinity of rivers, creeks, and channels. On the west the Chota Nagpur plateau is continued by an undulating tract, formerly largely covered with forest, but now for the most part brought under cultivation. There are some other elevated tracts, but the general level of the country is very low. A vast plain extends southward from the sub-montane tracts of Jalpaiguri in an almost unbroken expanse of monotonous fertility until it meets the forests, creeks, and swamps which under the name of the Sundarbans form a belt of jungle between the cultivated area and the Bay of Bengal. The delta of the Ganges, in its southern portions, where the labyrinth of creeks and rivers runs through the dense forest of the Sundarbans, exhibits during the annual inundation the appearance of an immense sea. Higher up, the rice-fields, extending to thousands of square miles, are submerged during the rains. The Presidency is occupied almost entirely by the Ganges and Brahmaputra alluviums, which comprise soils of two very distinct types, commonly designated the old and the newer alluvium. During the greater part of the year, Bengal is not only exposed to moist sea winds from the Bay, but is also practically beyond the influence of the hot, dry westerly winds that blow down the Gangetic plain in the hot season. The climate is accordingly damp and relaxing. The greater part of the rainfall, which is unevenly distributed, occurs between June and October. Taking the Presidency as a whole, the average density of the population is 551 to the square mile. Bengal is thus more thickly populated than any of the other Indian provinces, or any European country except Belgium and England.

Bihar and Orissa.—The new province of Bihar and Orissa, which includes the three great sub-provinces of Bihar, Orissa, and Chota Nagpur, differing widely in languages, land systems, and the character of their peoples, extends from the borders of Nepal on the north to the Bay of Bengal on the south. Bihar and Orissa consist of great river valleys—Orissa embracing the rich deltas of the Mahanadi and neighbouring rivers, while Bihar includes part of the higher valleys of the Ganges; Chota Nagpur is a mountainous region separating them from the Central Indian plateau. The province thus contains tracts presenting numerous diverse features. The rich alluvial plains of Bihar yield abundant produce of all kinds, while the slopes which cover most of Chota Nagpur are rich in mineral resources. Chota Nagpur also contains valuable forests, as does Orissa, though the resources of the latter division are mainly agricultural, the coast-fringe consisting, like Bihar, of alluvial lands. In the high tableland of Chota Nagpur rice is extensively grown on terraces and in the depressions

between successive ridges of surface, and maize, millets, oilseeds, and pulses are grown in the uplands, but the crests of the ridges are very infertile and barren. The annual rainfall averages nearly 58 inches in Orissa, 53 inches in Chota Nagpur, and 50 inches in Bihar, 90 per cent. of the total being received between June and October. Severe droughts occasionally occur in Bihar and in Orissa. Rice is the chief crop, occupying nearly a third of the total area of the province and nearly two-thirds of the cultivated area. Wheat is an important food staple in Bihar. Coal-mining is by far the most important of the mineral industries. Bihar and parts of Orissa are thickly populated. In North Bihar the average population per square mile is as high as 646. In the Chota Nagpur plateau, on the other hand, the average is only 186 persons to the square mile.

Assam.—Assam proper, or the valley of the Brahmaputra, is an alluvial plain, about 450 miles in length, with an average breadth of about 50 miles, lying almost east and west. To the north is the main chain of the Himalayas; to the south is the great elevated plateau, or succession of plateaux, known as the Assam Range, much broken at its eastern and western extremities and along its northern face, but in its central portion a region of tableland and rolling uplands. The various portions of this range are called by the names of the tribes who inhabit them—the Garo, Khasi, Jaintia, North Cachar, and Naga Hills. On the other side of the Assam Range lies the southern, or Surma, valley, which constitutes the second main division of the province; it comprises the two districts of Cachar and Sylhet, and presents many points of contrast with the valley of the Brahmaputra. It is much smaller, covering only 7,247 as compared with 24,598 square miles (excluding the area which, though geographically a part of the Surma valley, is included in Bengal). Its mean elevation above sea-level is much lower, and the course of the numerous rivers traversing it is sluggish, while the stream of the Brahmaputra is swift. Except for isolated hills and projections of the southern mountain ranges, the whole valley is a vast deltaic expanse, covered with a network of sluggish streams, and liable to deep flooding in the rains. The province lies freely open to moisture-laden winds from the Bay of Bengal, and the climate is damp. The copiousness of the spring rains, and the steady prevalence of moisture throughout the year, are very favourable to the two great crops of the province, rice and tea. Assam is, physically and climatically, essentially a forest country, though cultivation has to a large extent displaced the forests in the plains. In the three natural divisions of the province, the average density of the population varies from 406 persons to the square mile in the Surma valley to 126 in the Brahmaputra valley and 34 in the hills.

United Provinces.—The United Provinces of Agra and Oudh, known until 1902 as the North-Western Provinces and Oudh, constitute, with Delhi on the one side and part of north Bihar on the other, the tract spoken of by natives of India as Hindustan. The province includes four distinct tracts of country—portions of the Himalayas; sub-Himalayan tracts; the great Gangetic plain; and portions of the Vindhyas and East Satpuras. The Himalayan regions include some of the wildest and most magnificent country in the whole range of the Himalayas; they are thinly populated, and cultivation is possible only over limited areas. The sub-montane tracts include the bases of the forest-clad hills and the *Tarai*, a zone of marshy land with thick jungle. The climate of the latter is pestilential, and the population largely migratory. More than half the total area of the province is included in the great Indo-Gangetic plain. The Doab, or tract between the Jumna and the Ganges, a gently sloping plain of alluvial soil, includes the most prosperous part of the province, and is protected by canals. The tract between the Ganges and the Gogra is generally fertile and closely cultivated; the eastern portions have a heavier rainfall and denser population. In the south-west and south lie two tracts belonging to natural divisions of India differing considerably from the main portions of the province. British Bundelkhand, forming part of the great Central Indian plateau, is broken up by low rocky hills, spurs of the Vindhyas; the soil is largely rocky and infertile, water scarce, and cultivation precarious. This tract ranks, on the whole, as the poorest and most backward portion of the province. South Mirzapur, made up of the East Satpuras, consists of a wilderness of hill and valley, jungle and forest. In point of humidity and temperature, the province is intermediate between Bengal and the Punjab. The extremes as regards density of population are Benares, with 890 persons to the square mile, and the Himalayan tract, with 103.

(Area and Population.)

Punjab.—The Punjab, with the North-West Frontier Province and Kashmir, occupies the north-western corner of the Indian Empire. A fifth or a sixth of the total area of the province consists of mountainous or elevated tracts, and the remainder of plains, of alluvial formation, with a gentle fall in a south-westerly direction. The province may be divided into five natural divisions. The first two, the Himalayan tract in the north-east and the corner in the north-west cut off by the Salt Range, are distinct in all their characteristics from the plain country. Much of the Himalayan tract is wholly uninhabited, and taking the tract as a whole the number of persons to the square mile is less than 80. The Salt Range tract has a population of about 145 to the square mile. Skirting the base of the hills, a narrow submontane zone, comprising some of the most fertile and thickly-peopled portions of the province, with a population of 417 to the square mile, forms a connecting link between the hills and the plains. The plain regions that remain are divided by a meridian passing through Lahore into two strikingly dissimilar tracts. In the eastern plains the rainfall is so far sufficient that cultivation is possible without irrigation in fairly favourable seasons, though the margin of security is small. The population here averages nearly 300 to the square mile. Within the eastern plains lie the three great cities of Delhi, Amritsar, and Lahore; the population is more largely urban than in the western plains, and trade and manufactures flourish. The great plains lying to the west of Lahore, on the other hand, have a population of little more than 100 to the square mile. They form the common terminus of the two Indian monsoons, which have exhausted themselves of their vapour before they reach their goal; the rainfall is so scanty that cultivation is only possible with the aid of artificial irrigation, or on the low-lying river banks left moist by the retreating floods. But in this very circumstance these tracts find their security against famine or distress from drought. The western plains are traversed by the great rivers from which the Punjab derives its name. Between the river valleys lie high and, in the absence of irrigation, arid uplands, which, however, require only water to convert them into fertile and prosperous country. The progress of irrigation and the establishment of canal colonies have already changed the face of a great part of the country, and enabled parts of the western plains to challenge the title of the eastern plains as the most fertile, wealthy, and populous portions of the province.

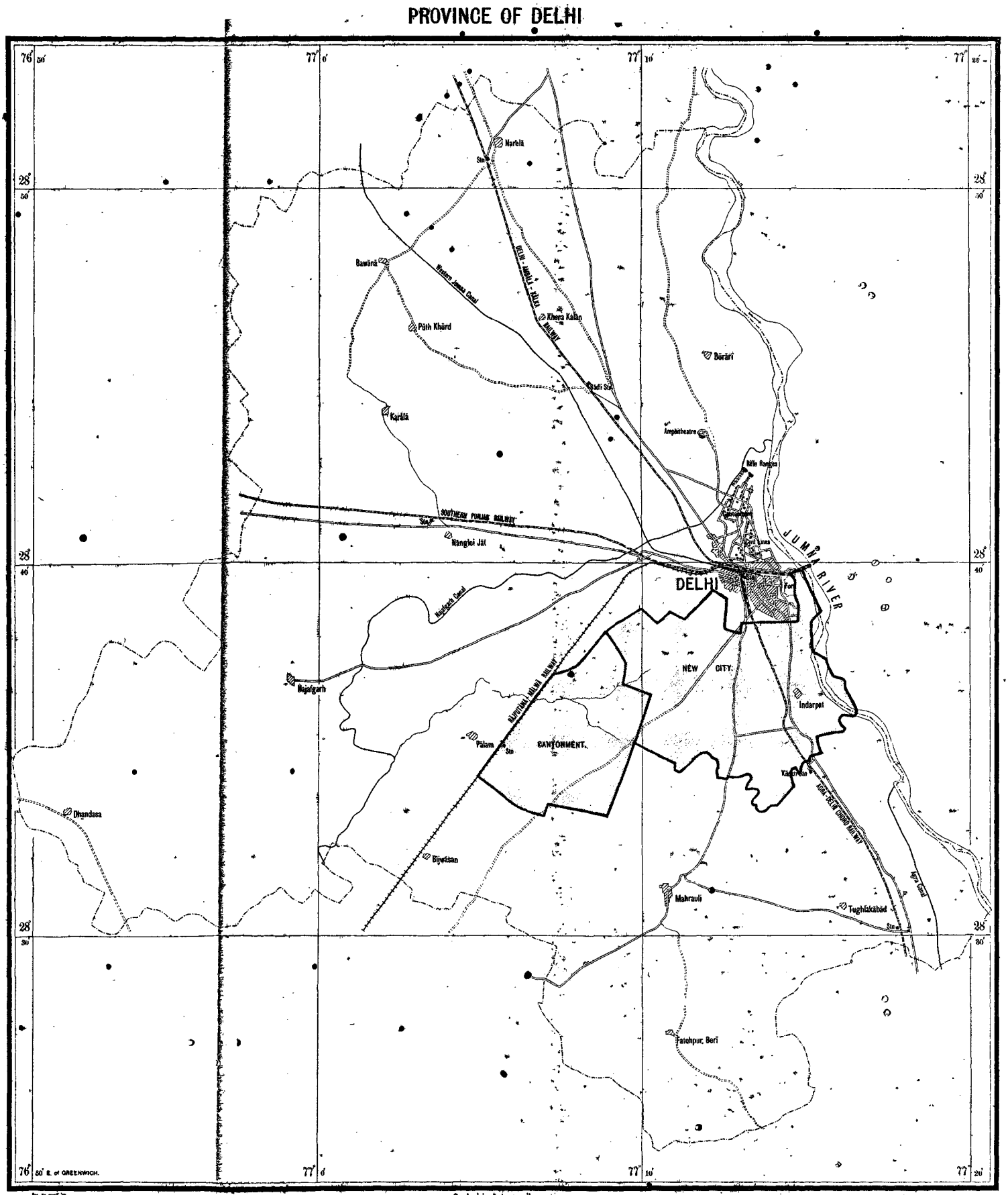
North-West Frontier Province.—The North-West Frontier Province, constituted in 1901, lies to the north and west of the Punjab, the Indus forming the dividing line for the greater part of the distance. The province falls into three main geographical divisions—the cis-Indus district of Hazara, a wedge extending into the outer Himalayas, with fertile plains at the base; the comparatively narrow strip of administered territory between the Indus and the hills, with varied characteristics; and the rugged mountainous regions between the administered districts and the borders of Afghanistan. The climatic conditions are extremely diversified. The province has two wet seasons, but the rainfall is precarious.

Central Provinces and Berar.—The Central Provinces comprise a large portion of the broad belt of hill and plateau country which separates the plains of Hindustan from the Deccan. Berar (otherwise known as the Hyderabad Assigned Districts), which has long been under British administration and was leased in perpetuity to the British Government in 1902,* is for administrative purposes attached to the Central Provinces. The combined province may be divided from north-west to south-east into three tracts of upland, alternating with two of plain country. In the north-west two districts lie on the Vindhyan or Malwa plateau; the surface of the country is undulating, and broken by frequent low hills covered with a growth of poor and stunted forest. South of this plateau comes the long and narrow valley of the Nerbudda, with deep alluvial deposits of extreme richness, excellently suited to the growth of wheat. South of the valley, the Satpura range or third division stretches across the province. The fourth geographical division, the plain of Berar, Nagpur, and Chhattisgarh, extends along the southern and eastern faces of the Satpura range. In the west the plain of Berar and Nagpur contains the rich black soil that makes the area the great cotton-growing tract of the province; further east the Wainganga basin receives a heavier rainfall, and is mainly a rice-growing tract; and further east still, beyond a belt of hilly country, lies the great plain of Chhattisgarh, with small embanked rice-fields, separated by ridges of uncultivable gravel. South of these level tracts lie two expanses of hill and plateau. In the west the rugged hills of the

* *See* page 29.

LIBRARY
OF THE
BOMBAY
BRANCH
OF THE
ROYAL ASIATIC SOCIETY

PROVINCE OF DELHI



Scale 1 inch to a mile.

Furlongs 0 4 0 1 2 3 4 5 Miles

The site of the New Capital is shown in red.

Ajanta range form the southern portion of Berar. In the east lies the vast area of hill and jungle comprised in the Chanda and Chhattisgarh Zamindaris and the Bastar and Kanker Feudatory States. The greater part of this latter area consists of dense forests with precipitous mountains and ravines; it produces only here and there the poorest rain crops, is sparsely peopled by primitive Gonds and other forest tribes, and, until a comparatively short time ago, was probably the wildest and least known part of the whole peninsula. In recent years it has been opened up in all directions by good roads, constructed under Government supervision from the funds of the estates through which they pass. The density of population per square mile for the province as a whole is only 122, the most thinly populated tract being the Bastar State, with only 33 inhabitants to the square mile.

Burma falls into three main natural divisions: Arakan, the Irrawaddy basin, and the old province of Tenasserim. Arakan is the strip of territory lying between the Bay of Bengal and the range of hills known as the Arakan Yoma. The northern part of this tract is barren hilly country, but in the west and south are rich alluvial plains containing some of the most fertile land in the province. The greater part of Burma proper is situated within the limits of the Irrawaddy basin. Four subdivisions may be distinguished. There is first the highland tract, including the mountainous regions round the sources of the Chindwin river and the upper waters of the Irrawaddy, the Chin Hills, and the Northern and Southern Shan States. The greater part of this country consists of rugged hills, but there are in the Shan States some open plateaux which are fertile and well populated. The second tract, known as the dry zone of Burma, includes the whole of the lowlands lying between the Arakan Yoma and the foot of the hills that rise up to the Shan plateau. It stretches along both banks of the Irrawaddy from above Mandalay to below Thayetmyo, and consists mostly of undulating lowlands. The third subdivision, the Irrawaddy Delta, is a vast expanse of plain, 12,000 square miles in area, consisting almost entirely of a rich alluvial deposit and fertile in the highest degree. The deltaic districts are devoted mainly to rice-growing. To the east, the country draining into the Sittang river—consisting of hills in the north and broad fertile plains in the south—forms a fourth subdivision. The third natural division of Burma is the old province of Tenasserim, which formed the nucleus from which British rule in Burma has grown. It is a narrow strip of country, mountainous and much intersected by streams, lying between the Bay of Bengal and the high range of hills forming the eastern boundary of the province towards Siam. In most parts of Lower Burma, and in portions of Upper Burma, the rainfall is abundant and the climate moist and enervating for nearly half the year, but in the dry zone the rainfall falls as low as 20 or 30 inches a year. The average population per square mile ranges between 124 in the deltaic plains and 15 in the northern hill districts.

Baluchistan.—Some account is given of this province, the greater part of which consists of native states or tribal territory, in the next chapter (page 18).

Ajmer-Merwara is an isolated province of British India in Rajputana. It consists of only two districts—Ajmer and Merwara—and is entirely surrounded by native states. The two districts are physically very distinct, plain country predominating in Ajmer and hills in Merwara. The province lies on the border of what may be called the arid zone, and the rainfall is precarious.

Coorg is, after Delhi, the smallest of the provinces, having an area of only 1,582 square miles. It is a picturesque highland country, occupying the summits and slopes of a portion of the Western Ghats, and lying between Madras on the west and Mysore on the east. A large part of the country is covered with forest. The rainfall is heavy, and the valleys, where practicable, are formed into flats and terraces for rice cultivation. Coffee also is extensively grown, and its cultivation forms the chief industry of the province.

The Andaman and Nicobar Islands are covered for the most part with forest and jungle, and inhabited by primitive tribes. They derive such importance as they possess, from the administrative point of view, from the existence of the penal settlement at Port Blair in the Andamans.

Delhi.—The province of Delhi, which came into existence on the 1st October 1912, consists of a part of what was formerly the Delhi district of the Punjab, lying to the west of the River Jumna and extending some distance north, south, and west of the city of Delhi. The area of the province, according to the latest figures available, is 557 square miles, and the population 391,828.

CHAPTER III.

THE FRONTIERS AND NATIVE STATES.

The immediate concern of this Statement is with British India; but some account must be given of the Native States, not merely because, geographically and politically, they form a very important part of India (using that word in its ordinary sense, which, since the Interpretation Act of 1889, is also the meaning attaching to it in Acts of Parliament), but also because the conditions in the Native States are intimately connected with those in British India. At the same time it is impossible, in view of the great number of the Native States, of the wide differences between them, and of the absence in many cases of detailed and recent reports, to deal with them as fully as with the provinces of British India, or to apply to them the same generalised and comparative method of treatment. Such information as to their condition and progress during the decade as it is practicable to give in the limited space available is therefore brought together in this chapter, in which each State, or group of States, is dealt with separately. The frontiers and frontier relations generally may appropriately be dealt with in the same chapter. Along a great part of the external land frontier, the borderlands on the Indian side consist of Native States or tribal territory. It is proposed in the first part of the chapter to deal with the external land frontier, section by section, in geographical order from west to east, and with such Native States and tribal areas as lie along the Indian side of that frontier. In the second part of the chapter the internal Native States (*i.e.*, those not lying on the external land frontier), which form the great majority, are dealt with.

Before proceeding to deal with the frontier, some general information as to the Native States may be given. As has already been shown, they occupy considerably more than a third of the total area of India, and contain between a quarter and a fifth of the total population.

Under the term "Native States" are included a very large number of territorial units, variously situated in all parts of India, and differing among themselves in the widest possible manner in size and importance, but having in common this feature, that they consist of territory which does not form part of His Majesty's dominions, but is under his suzerainty. A Native State has been defined* as being "a political "community, occupying a territory in India of defined boundaries, and subject to a "common and responsible ruler who has actually enjoyed and exercised, as belonging "to him in his own right duly recognised by the supreme authority of the British "Government, any of the functions and attributes of internal sovereignty." These latter functions and attributes may be divided in various proportions between the ruler of the State and the suzerain power. Some States enjoy a substantial immunity from interference in nearly all functions of internal administration; others are subject to much stricter control. Except that they come within the scope of the same general designation, the States at one end of the scale—such as Hyderabad, with an area of over 82,000 square miles, and a population of more than 13 millions—have little in common with those at the other, which may consist of only a few villages, or may be (as has been said of some of the Simla Hill States) little more than small holdings. A recent list puts the total number of Native States at 693, of which 175, including those of the greatest importance, are in political relations with the Government of India, either directly or through an agent of the Governor-General, and 518 in political relations with the various local Governments. The geographical distribution is very irregular. Thus Bombay has 354 States in direct relations with its Government, while Madras has but five, and Bengal, as now constituted, only two. Of those in relations with the Government of India, the Central India Agency includes 150, and the Rajputana Agency only 21, with, nevertheless, a much larger total area. Of the States in the former Agency, 137 have between them a total area of only 13,351 square miles, and it is reported that "16 are not really States, as their chiefs now possess no land, but only guaranteed cash revenues."

As indicating generally the nature of the relations between the British Government and the Native States, the following account of the rights and obligations of the latter, as at present established by written agreements, by tacit consent, or by usage,

* "The Native States of India," by Sir W. Lee-Warner, G.C.S.I.

is quoted from the Imperial Gazetteer of India,* to which reference may be made for fuller information on the subject:—

"The chiefs have, without exception, gained protection against dangers from without, and a solemn guarantee that their protector will respect their rights as rulers. The paramount power acts for them in relation to foreign powers and other Native States. Parliament has recognised this in 39 & 40 Vict. c. 46, of which the preamble runs: 'Whereas the several Princes and States in India in alliance with Her 'Majesty have no connexions, engagements, or communications with foreign powers, and the subjects of 'such Princes and States are, when residing or being in the places hereinafter referred to, entitled to the 'protection of the British, and receive such protection equally with the subjects of Her Majesty.' Next, as the passage just quoted and many Acts of the Indian Legislature show, the inhabitants of Native States are subjects of their rulers, and, except in the case of personal jurisdiction over British subjects, and of 'residuary jurisdiction' as already explained, these rulers and their subjects are free from the control of the laws of British India. Accordingly, criminals escaping into a Native State must be handed over by its authorities; they cannot be arrested by the police of British India without the permission of the ruler of the State. The native Princes have, therefore, a suzerain power which acts for them in all external affairs, and at the same time scrupulously respects their internal authority. Nor are they secured only against dangers from without; the suzerain also intervenes when the internal peace of their territories is seriously threatened. Finally, they participate in all the benefits which the protecting power obtains by its diplomatic action, or by its administration of its own dominions, and thus secure a share in the commerce, the railways, the ports, and the markets of British India. Except in very rare instances, no guarded customs-line marks the frontier of a British district; no passports are required to cross it; and, notwithstanding the fact that the subjects of a Native State are foreigners in the eye of the law of British India, they are admitted into most of the public offices of the British Government.

"It is obvious that these rights carry with them corresponding obligations; and the latter may be considered under the heads of obligations in respect of foreign relations, those affecting the common defence, and those necessary for the good government and welfare of the States themselves. The duties discussed under the first and second of these heads are common to all the States in principle, although they may be affected in details by special agreement, while those in the third category are much modified by the extent of the powers of government left with the various Princes, when they were admitted into the protectorate. For it has already been explained that in some petty States a mere fraction of jurisdiction was left with the chief; and there are even cases where such a State has become so small that the whole management of it now devolves upon officers of the paramount power, acting on behalf of a chieftain incapable of exercising even criminal jurisdiction over those who are nominally his subjects."

The first obligation referred to above is, briefly, that the ruler of a Native State may not enter into direct relations with foreign nations or with other States. As regards military matters, the essential conditions are that the Native States in alliance with the British Government shall not embarrass the military defence of the Empire; that they shall render active co-operation in securing the efficiency of the Imperial Army; and that they shall take, in times of emergency, the parts assigned to them. The treaties with most of the larger States provide for the limitation of their forces. A certain number of States now maintain Imperial Service troops, which will be referred to below; their total strength is about 22,000 men. The other military forces maintained by the Native States amount to about 111,000 men (besides some 47,000 armed police), but these troops are kept for purposes of internal order or ceremony. Under the third head, the suzerain power claims a right to intervene in cases of grave misrule, or to prevent disputed successions or rebellion, or the dismemberment of a State by division or legacy. The Government of India has interfered also, when necessary, to prevent infanticide, *sati*, slavery, or barbarous punishments. The Native States are required to provide for the safe transit of Imperial mails in their territories, and to afford such facilities in this connection as are necessary in Imperial interests. The British Government also controls the general system of railway, telegraphic, and telephonic communications in India. There are, on the other hand, many matters of common welfare in regard to which the British Government tenders advice, but waits for the willing co-operation of the Native Princes: such are reforms of administrative or revenue systems, and currency. In regard to the exercise of jurisdiction by the suzerain power, there are wide differences between the various States; but the cession of jurisdiction over railway lines that form part of the Imperial system of railways is invariably required. It need hardly be added that where rights and obligations are defined by written agreements, the latter must often be read with due regard to the effects of usage and altered circumstances; and that over the whole field of the relations between the suzerain power and the Native States the maintenance of a good understanding and friendly relations, and a reliance on the loyalty of the Native Princes, play an all-important part.

The powers that devolve upon the suzerain are exercised through political officers who, as a rule, reside in the States to which they are appointed. In the larger States the Government of India is represented by a Resident; where States are grouped, as in Rajputana and Central India, there is a single Agent to the Governor-General for the

* Vol. IV., Chapter III.

group, assisted by local Residents or Political Agents. These officers are the channels through which the Native States communicate with the Government of India, the officials of British India, or other Native States; and they are expected to advise and assist the ruling chiefs in any matters on which they may be consulted. In the larger States under the control of local Governments, Political Agents are similarly employed, but in the case of petty States scattered about British provinces it is usual to entrust the duties of Agent to the Collector or Commissioner within whose territorial charge they lie.

Speaking generally, it may be said that the majority of Native States are of modern origin, and that the wide differences between them in the matter of size are to a large extent to be explained by the fact that inclusion within the British protectorate, involving as it did, the cessation of warfare between chief and chief, and actually terminating in many cases a period of strife, cut short processes of change in some cases at a stage where a central ruler had established his power over a wide area, and in others at a stage where a number of smaller rivals were still struggling one with another. The rise of the greater number of the States in the north and centre of the country took place during the decadence of the Mughal Empire and the general anarchy and confusion that prevailed in India during the last half of the eighteenth century and attended the downfall of the Maratha rule in the early years of the nineteenth. Thus it may be said that with remarkably few exceptions the States, in their present dimensions, rank, and position, are of more recent origin than the British power in India.

The Imperial Service Troops.—The voluntary movement towards co-operation in the task of Imperial defence that led to the formation of the force of Imperial Service Troops was initiated in 1887 by an offer made by the Nizam of Hyderabad, whose example was at once followed by a number of the leading Native Princes. The troops, which are under regular inspection by British officers, though available for Imperial service when placed at the disposal of the British Government by their rulers, belong to the States and are recruited from their subjects. Their armament is the same as that of the Native Army, and in training, discipline, and efficiency they have reached a high standard of excellence. They have done good service on the North-West frontier, and also in China and Somaliland. At the beginning of the decade twenty-three States between them supplied a total of over 16,000 men. Some additional offers of contingents have since been accepted, and the total strength on 1st April 1912 was 22271, towadrs which twenty-nine States contributed. The total included some 10,000 infantry and 7,500 cavalry, while transport and camel corps contributed 2,700 and 700 men respectively. Sappers also numbered about 700. Gwalior contributes nearly 4,000 men, and Kashmir over 3,500; Patiala, Hyderabad, and Alwar contribute over 1,000 each.

The Imperial Cadet Corps.—Mention may be made here of the Imperial Cadet Corps, founded in 1901 with the object of providing military training for the scions of ruling and noble families. The corps consists of about 20 young men of noble birth who have been educated at the Chiefs' Colleges. The course of instruction lasts between two and three years, and the cadets are taught military exercises and military science.

Chiefs' Colleges.—Great stress is now laid on the education of the sons of chiefs, and on the proper administration of States during minorities. A number of Chiefs' Colleges have been established at which a special course of instruction is provided, and for young chiefs not attending these colleges tutors and guardians are appointed. The Mayo College at Ajmer is intended primarily for the sons of chiefs and nobles in Rajputana, and the Daly College at Indore and the Rajkumar College at Rajkot for the same classes of boys in Central India and Bombay respectively. The Aitchison College at Lahore is also reserved for the education of boys of rank and family, most of the pupils coming from the leading families of the Punjab. There is also a Rajkumar College, not altogether on the same footing as the four larger Chiefs' Colleges, at Raipur, in the Central Provinces, and a Government School at Taunggyi, of more recent origin, for the sons of Shan chiefs (*see* page 28).

Many of the States pay tribute, varying in amount according to the circumstances of each case, to the British Government. This tribute is frequently due to exchanges of territory or settlement of claims between the Governments, but is chiefly in lieu of

former obligations to supply or maintain troops. The actual receipts in the form of tribute and contributions from Native States in the year 1911–12 are summarised in the following table. The relations of the States to one another in respect of tributes are complicated, and it would serve no useful purpose to enter upon the question. It may, however, be mentioned that a large number of the States of Kathiawar and Gujarat pay tribute of some kind to Baroda, and that Gwalior claims tribute from some of the smaller States of Central India.

States paying tribute directly to the Government of India.	£	£
Tribute from Jaipur	26,667	
„ „ Kotah	15,648	
„ „ Udaipur	13,333	
„ „ Jodhpur	6,533	
„ „ Bundi	4,222	
„ „ other States	15,170	
		81,573
Contribution of Jodhpur towards cost of Erinpura Irregular Force	7,667	
Contribution of Kotah towards cost of Deoli Irregular Force	13,333	
Contribution of Bhopal towards cost of Bhopal Levy	10,753	
Contribution of Jaora towards cost of United Malwa Contingent	19,711	
Contributions towards cost of Malwa Bhil Corps	5,816	
		57,279
Fees on succession		3,437
Total		142,290
Central Provinces and Berar.		
Tribute from various States		15,696
Burma.		
Tribute from Shan States	28,893	
„ „ other States	33	
		28,927
Eastern Bengal and Assam.		
Tribute from Manipur	3,333	
„ „ Ramrai	13	
		3,347
Carried foward		190,260

	£	£
Brought forward		190,260
Bengal.		
Tribute from various States		3,483
United Provinces.		
Tribute from Benares	12,148	
„ „ Kapurthala (Bahraich)	8,733	
		20,882
Punjab.		
Tribute from Mandi	6,667	
„ „ other States	3,086	
Fees on succession	133	
		9,886
Madras.		
Tribute from Travancore	52,207	
Peshkash and subsidy from Mysore	233,333	
Peshkash and subsidy from Cochin	13,339	
Peshkash and subsidy from Travancore	888	
		299,768
Bombay.		
Tribute from Kathiawar	31,129	
Tribute from various petty States	2,825	
Contribution from Baroda State	22,068	
Contribution from Jagirdars, Southern Mahratta Country	5,765	
Subsidy from Cutch	5,484	
Fees on succession	3,457	
		70,727
Grand total		595,005

It was announced at the Coronation Durbar of 1911 that there would be in future no *nazarana* payments on successions.

Hardly anything can be said in general terms as regards the progress and condition of the Native States. Their institutions are being modified, under modern conditions of communication, by infiltration of ideas and practices from British India. Obviously all are not equally able to assimilate new principles; their forms of government are almost as various as the races governed. There are States in nearly every stage of development, tribal, feudal, and constitutional; though common features of all of them are the personal rule of the chief and his control over legislation and the administration of justice. There is, however, an increasing tendency to follow British models in financial arrangements and educational systems, while many States have adopted civil and criminal laws from the codes of British India. Arrangements for common action with the British Government in regard to railways and canals, posts and telegraphs, the suppression of *thagi* and dacoity, and the surrender of criminals, have long been in force.

Outstanding features of the decade were the leasing of Berar in perpetuity from the Nizam of Hyderabad, and the creation of the new State of Benares. These events are referred to again below.

The Frontiers and Frontier States.

Baluchistan.—Baluchistan occupies the extreme western corner of the Indian Empire, extending on the west and north to the Persian and Afghan frontiers, from the Arabian Sea to Waziristan in the North-West Frontier Province. The country is almost wholly mountainous, and for the most part arid and thinly populated; the rainfall is very irregular and scanty; but rich crops of all kinds are raised in the fertile valleys. The great majority of the inhabitants are Muhammadans. The Baloch, from whom the province takes its name, are not the most numerous people, being outnumbered by both the Brahuis and the Afghans. The total area is put at 134,638 square miles—an area greater than that of the whole of the British Isles; there are three main divisions: (i) British Baluchistan proper, with an area of about 9,500 square miles, consisting of tracts assigned to the British Government by treaty in 1879; (ii) Agency Territories, with an area of about 44,700 square miles, composed of tracts which have from time to time been acquired by lease, or otherwise brought under control, and placed directly under British officers; and (iii) the Native States of Kalat and Las Bela, with an area of 80,400 square miles. The population was returned in 1911 as 834,703, of whom rather less than a half were inhabitants of the British areas. The province, including the Native States, therefore contributes altogether not much more than one-fourhundredth part of the total population of the Indian Empire, in spite of the fact that its area is more than one-fourteenth of the total area.

The majority of the indigenous population are dependent for their livelihood on agriculture, the provision and care of animals, and transport. They are largely nomadic; villages are few and small, and there are only six towns, inhabited for the most part by aliens. A tribal organisation prevails over the greater part of the province.

British Baluchistan, though its administration presents points of special interest, is not far enough developed to figure prominently in the remaining chapters of this Statement, and some of the chief features of the administration, and of the progress made during the decade, will be noticed here. Further information will be found in the review by the local Government in Chapter XXIV.

British Baluchistan.—Baluchistan, as it now exists, may be said to be a creation of the last thirty years. Its founder was Sir Robert Sandeman, who was appointed Agent to the Governor-General, after much previous experience in these regions, in 1877, when Quetta was permanently occupied, and died while still holding the post in January 1892. During the interval the administration had been organised; demarcation and consolidation followed. An important administrative change was made in 1903, when the Nasirabad Niabat (now known as the Nasirabad *tahsil*) was taken over from the Khan of Kalat on a perpetual lease, at an annual quit-rent of £7,833. The opportunity was taken to readjust the Agencies and districts of the province with a view to greater convenience of administration.

The province is still in an early stage of development; evidence of the persistence of primitive conditions is to be seen in many directions—as, for example, in the frequency of local disputes and disturbances, and the tendency to fanatical outrage; but much progress has been made since the assumption of control by the British Government substituted comparative order and security for the anarchy and continual strife that prevailed up to 1876.

During the past decade there has been, in spite of local quarrels and disorders, no serious internal disturbance, and no trouble has been experienced on the Persian frontier. Conditions on the Afghan frontier are different, and raids by gangs of Mahsud and other outlaws have frequently caused trouble, particularly on the northern portions of the border. In April 1909, 14 men of the Zhob Levy Corps were ambushed and 12 of them killed; but the subsequent capture and imprisonment of three of the most notorious freebooters concerned was reported to have had an excellent effect on the border. The Zhob Levy Corps, which guards a long stretch of the northernmost portion of the frontier, was strengthened during the decade, and is now known as the Zhob Militia; the successful working of this corps, which was first raised in 1890, led to the extension of the same system to Makran and Chagai. The Makran Levy Corps, raised in 1904, has as its object to secure the better patrol of the British side of the Makran border and the proper enforcement of the authority of the Khan; the Chagai Levy Corps, raised in 1905, is intended to protect the Nushki-Seistan trade route and to strengthen the posts on the western portion

of the Afghan frontier. The system of tribal levies has continued in successful operation also as an important factor in the ordinary business of administration. The district levies differ from the levy corps in that they are for the most part unarmed, except for such weapons as they provide for themselves (usually swords); they are bodies of tribesmen, ordinarily employed within their own tribal limits, under the control of the district officers, and correspond to a large extent to the police and petty officials in the regulation provinces. They are reported to do their work well, and a certain number of them have recently been armed with Martini-Henry rifles to enable them to resist the attacks of raiders. The regular police of the province, whose operations are limited to the railway and district and tahsil headquarters, are recruited for the most part in the Punjab.

The tribal organisation is in other ways turned to account for administrative purposes, and particularly for the peaceful settlement of disputes and for dealing with cases, civil and criminal, in which local custom plays an important part. A large number of cases, such as blood-feuds, important disputes as to land, and cases connected with women, are referred to councils of tribal elders known as *jirgas*. The system, which is indigenous to the country, has been developed under British administration, the Frontier Crimes Regulation having been applied, with certain modifications, for this purpose. Joint *jirgas* and special *jirgas* are convened from time to time for cases involving wider issues. The keynote of administration is thus self-government by the tribesmen, as far as may be. The system is reported to work well, and the awards of the *jirgas* are in most cases confirmed. A passage from the report of the Agent to the Governor-General for 1905–06 may be quoted as throwing light both on the working of the system and on the material on which it works. "In the Magasi country," it was reported, "a decision of the Shahi *jirga* " disallowing the custom, under which the revenge due on a guilty man can be taken " on his relations if the offender has absconded, has been recorded and will be treated " as a leading case."

As was indicated above, agriculture, camel-driving, and flock-owning constitute the occupations on which the majority of the population depend. Cultivators were assisted, prior to 1909, by the grant of advances under executive authority. In 1909 the Land Improvement and Agriculturists' Loans Acts were formally applied to the province. In view of the backwardness of the country, encouragement is, in special cases, given to applicants by the grant of loans on easy terms or without interest. The appointment of a Superintendent of Arboriculture and the foundation of a number of nurseries, especially near Quetta, in 1903, marked the beginning of an important effort to develope the cultivation of fruit and timber trees. The people of the country are said to take a keen interest, and large numbers of trees have been raised and distributed. Arrangements were made in 1910 for Mr. A. Howard, the Imperial Economic Botanist, to spend the summer months of the next three years in Baluchistan with a view to the further development of fruit growing on commercial lines. Experiments with a view to the introduction of the European olive and of American maize are also reported. The horse-breeding industry is encouraged by the provision of Government stallions. In 1910 the local Government sanctioned, as an experimental measure, the grant of a bonus of Rs. 10 for each remount horse under three years of age purchased at the annual Quetta and Sibi shows. It was hoped that this concession would put the Baluchistan shows in a position of equality with those at Lyallpur and Sargoda.

The mining industry has made some advances. The output of coal was doubled during the decade, and the discovery of chromite in 1903 gave rise to a considerable industry, which is, however, hampered at present by the high cost of carriage due to the absence of railway facilities.

Education has been, and still is, very backward in the province; but some progress has been made in recent years. In education, as in other matters, the nature of the country and of the inhabitants, and the difficulty of finding funds, prevent rapid progress. The provincial revenues are small, and their growth is slow.

An important addition was made during the decade to the not very extensive railway system of the province in the shape of the Quetta-Nushki line, which was commenced in 1902 and opened for traffic in 1905.

The year 1911–12 was on the whole one of prosperity, especially in the administered districts, but crop failures in parts of Sibi, Loralai, Nasirabad, and in the Marri and Bugti country, necessitated various measures of relief. Raids from across the border continued to give trouble in Loralai and Zhob, and the influx into the trans-border

districts of modern weapons of precision, due to the illicit arms traffic, has so disturbed the balance of power between our own tribesmen and the tribesmen on the other side that it has become exceedingly difficult to enforce tribal responsibility for trans-border raids with any show of justice. Arrangements were being made to issue Government arms to the tribesmen.

The Baluchistan Native States may be dealt with briefly. The areas under British administration (except Nasirabad) form a strip running along the whole northern border of the province. On the eastern boundary, between Nasirabad and the British districts, lie the territories of the Marris and Bugtis, nomadic Baloch tribes, which are under the control of the Political Agent in Sibi. The tribes receive allowances, and are generally well-behaved. The centre and south-west of the province are occupied by the Kalat State, and the remaining south-eastern corner forms the much smaller state of Las Bela.

Kalat and Las Bela.—Kalat has a total area of 73,278 square miles, and is divided into five main divisions, Kachhi, Sarawan, Jhalawan, Makran, and Kharan, the latter being quasi-independent. Except in Makran and Kharan, the people are organised into tribes, which form the Brahui confederacy, with the Khan of Kalat at its head. Lawless and turbulent elements assert themselves from time to time; but many differences are amicably adjusted by the efforts of the political officers, coupled with the application of the system of arbitration by *jirga*. The relations with the British Government are governed by treaties of 1854 and 1876. A Political Agent is maintained in Kalat, and the Khan is assisted in the work of administration by a Political Adviser, whose services are lent by the British Government.

Las Bela has an area of 7,132 square miles. The chief, known as the Jam, is bound by agreement to conduct the administration of his State in accordance with the advice of the Governor-General's Agent.

At the census of 1911, the population of Kalat was returned as 359,086, and that of Las Bela as 61,205.

There is little to record as to the internal affairs of the two States, which were ruled throughout the decade by H.H. Mir Sir Mahmud Khan, G.C.I.E., and by the Jam Mir Kamal Khan respectively. An experiment in sericulture, initiated by the Political Agent at Mastung in 1903, promised well, but the operations were temporarily abandoned in 1910, owing to the great difficulty in obtaining mulberry leaves from the owners of trees, and to the apathy and want of enterprise of the local people, who could not be induced to take up the cultivation of silk as a cottage industry, as it was hoped they might do. Large numbers of mulberry trees have, however, been planted, and it was hoped to resume operations in four or five years' time, when the industry may be independent of outside leaf supply.

A primary school was opened at Mastung in 1904, and three others in 1905 and 1906. The four schools had altogether 198 scholars in March 1912. In Las Bela a third school was opened in 1905, but closed in 1906 for want of pupils, and by 1909 only one school remained. It had 60 scholars in 1912. A Khoja school at Ormara, opened by H.H. the Agha Khan in 1910, and partly supported by him, is reported to be flourishing, and had at the date of the latest report 44 pupils.

The Chief of Kharan, Sardar Sir Nauroz Khan, K.C.I.E., died in June 1909, and was succeeded by his son, Sardar Yakub Khan. The attitude of the new chief towards Government, and his administration generally, were unsatisfactory. In 1911 he was murdered by the sepoys of his guard. Some trouble was caused by an uncle of the murdered chief, who declared himself Chief, but the Government of India finally recognised the succession of a son, Mir Habibulla Khan, and approved measures for the administration of the State during his minority.

Serious unrest, arising out of long-standing tribal differences, prevailed in Jhalawan in 1911–12. A settlement was ultimately effected by a *jirga* convened at Quetta.

The North-West Frontier.—From the boundary of Baluchistan, the frontier runs between Afghanistan on the one side and the North-West Frontier Province on the other till it reaches what is almost the northernmost limit of India in the Hindu Kush mountains.

Afghanistan.—The Amir Habibulla Khan, who succeeded in 1901, continued to reign in Afghanistan throughout the decade, and peaceful relations were maintained. A mission from the Government of India visited Kabul in 1905, and a treaty was signed with the Amir continuing the engagements made between his father, the late Amir, and the British Government. In 1907 the Amir paid a visit to India.

Conditions on the frontier have been disturbed from time to time by local disputes and, more frequently, by the raids of gangs of outlaws having their base of operations in Afghan territory. By agreement with the Afghan Government, a joint Anglo-Afghan Border Crimes Commission met in May 1910 and disposed of over 2,600 cases, besides coming to an agreement with regard to the removal of outlaws from both sides to at least 50 miles from the border.

The year 1911–12 was marked by an extensive rising in Khost against the authority of the Amir. British interests were in no way seriously involved by the rising, though it resulted in the arrival in the Kurram Agency of a large number of defeated Afghan troops, who were hospitably received, and eventually returned to their own country.

The North-West Frontier Province.—Only about a third part of the North-West Frontier Province is British territory. So far as this part is concerned, the province is dealt with, with the other provinces, in the later chapters of this Statement. The British districts lie along the Punjab border; between them and the Afghan frontier stretches a belt of tribal territory, varying in breadth from about 20 miles to over 100 miles in the north, the tribes occupying which are under the political control of the British Government. Some small areas, including the Kurram Valley, which runs up to the frontier, are under British administration. The border region is divided into a Residency—Waziristan—and four Political Agencies—Northern Waziristan, the Kurram, the Khyber, and Dir, Swat, and Chitral—taking them in geographical order from south to north. In these, with the exception of the last, nothing approaching an organised State can be said to exist. In the north are a number of chieftainships, of which the most important is Chitral.

The Frontier Tribes.—The nomenclature of the border tribes and their subsections is complicated, and the fact that many of the sectional names are in common use at the same time as the more comprehensive tribal names makes confusion easy. A brief enumeration of the more important tribes and sections may therefore be useful. It may be mentioned in the first place that "Pathan," whatever its original significance, is not now a racial term. It is said rather to denote status, and is used generally of the frontier tribes and their connections. Furthest to the south, on the borders between the North-West Frontier Province and Baluchistan, are found the Shiranis, who are an Afghan people. Waziristan is inhabited by the Waziris, who have two main branches, the Mahsud Waziris, found in Southern Waziristan, and the Darwesh Khel Waziris, mostly in Northern Waziristan. The latter have two main sections, the Utmanzai and the Ahmadzai, and these again are subdivided into numerous clans. In the Kurram the Turis (who, unlike their neighbours, are Shiahs) form the strongest element. In the Khyber region, the main tribes are the Orakzai and Afridis, both found in the mountainous country south of the Khyber Pass, commonly called Tirah; both are extensively subdivided, the strongest divisions of the Orakzai being the Lashkarzai and the Masozai, and of the Afridis the Malik Din Khel, the Zakka Khel, the Kambar Khel, and the Kuki Khel. Between the Khyber Pass and the Kabul River are the Mullagoris, and further north the Mohmands and the Utman Khel. Beyond these are the Yusufzai, who form the bulk of the inhabitants of Swat and Dir. Chitral is inhabited by races whose origin is obscure.

The attitude of the British Government towards the border tribes may be described briefly as one of minimum interference. Most of the tribes are in receipt of allowances in return for definite services; they are restrained from committing offences in British districts or protectorates and in Afghanistan, but so long as they refrain from offences of this nature and observe the conditions of their allowances, Government does not concern itself with their internal affairs. In 1904 it was decided that, in view of this established policy, it was inadvisable to accede to a request made by certain Orakzai clans on the Kohat border that they might be taken under British administration.

The history of this part of the frontier is largely concerned with raids and the measures taken to punish and prevent them. A blockade, accompanied by punitive operations, against the Mahsud Waziris was brought to a close just before the period dealt with in this Statement opens. Later in the same year (1902) it was found necessary to take active measures against the Darwesh Khel Waziris. A short inroad by troops into their country was followed by the surrender and imprisonment of most of the outlaws who had been harassing the Bannu and Kohat borders, and the general effect on the border was reported to be excellent. The position of affairs in the Mahsud country since 1902 has at times been far from satisfactory. The murder by Mahsuds of three British officers in 1904 and 1905 necessitated the enforcement of tribal responsibility by the infliction of a heavy fine, and the disbandment of the Mahsud companies

of the Southern Waziristan Militia. In subsequent years the Mahsud country was disturbed by the struggle for power between the Maliks of the tribe and the Mulla Powindah, whose followers were responsible for many raids on British territory. During the last two or three years, however, the conduct of the Mahsuds has improved. New fields of employment were provided for them in 1910, when the enlistment of a certain number in the Indian Army was sanctioned, and in 1911, when some 2,000 men were employed on railway and other public works. The Darwesh Khel Waziris have given no serious trouble recently.

Further north, punitive operations had to be undertaken against the Zakka Khel Afridis and the Mohmands in 1908. Papers have been laid before Parliament,* and it is not necessary here to go into details. The Zakka Khel had for some years been increasingly prominent both in aiding and abetting the inroads of Afghan robber gangs and in raiding on their own account, which culminated in a raid on Peshawar City in January 1908. The expeditionary force sent against them arrived in the Bazar Valley in the middle of February and left at the end of the month, after punishing the Zakka Khel and effecting a settlement with a *jirga* representative of the whole Afridi tribe. Two very satisfactory features were the sensible attitude of the other Afridi clans, and the excellent behaviour of the Khyber Rifles in rather trying circumstances. The wave of unrest spread to the Mohmands, who, encouraged by the fanatical preaching of Afghan Mullas, crossed the British border as an armed force in April. They were driven back with loss, but maintained a refractory attitude, and it became necessary to send an expedition against them. The operations occupied the second half of May; the offending sections were punished, and a settlement was effected. During the closing years of the decade relations with the tribes on the more northern portions of the frontier were generally satisfactory.

Raiding by gangs of professional robbers and outlaws, operating mostly from the Afghan side of the frontier, showed a great increase in the few years preceding 1910. A return prepared in 1912 showed that the number of raids into the districts of the North-West Frontier Province, which for the first five years of the decade averaged 15, rose in 1907–08 and 1908–09 to 49, and in 1909–10† to 67. In the latter year 37 persons were murdered and 58 kidnapped. The matter engaged the attention of the Government of India, who addressed the Amir of Afghanistan, with the result that all the captives then in Afghanistan were released and most of the notorious outlaws in Khost were arrested by the Governor of that province. The remaining outlaws were thus driven into the belt of territory between the British administered districts and the Afghan border, so that it was possible, by putting pressure on the tribes, to capture or kill many of the more notorious raiders. The border was quieter in March 1911 than it had been for some time, and in the last year of the decade all districts showed an improvement as regards raids and other offences from across the border. The difficulty of protecting the border has increased as the arms carried by the raiders have improved. In 1908, with a view to enabling the villagers to meet raiders on more equal terms, Martini-Henry rifles were issued to all border villages that required them. In some subsequent encounters, the villagers have given a good account of themselves.

Relations with the great majority of the border tribes were very satisfactory throughout the year 1911–12. Over the entire extent of the frontier only two noteworthy events were to be recorded. The most important from the point of view of British interests was an exceptionally bold, but abortive, rising of the Mullah Powindah and the section of the Mahsud tribe that acknowledged his influence against Government. The attempt had for its object the restoration of the Mullah's waning influence with the tribe, and at one moment presented a very serious appearance, as about 2,000 men were in the field and the Political Agent was closely invested in the fort of Sarwakai. Prompt action on the part of the Derajat Brigade, however, caused the rapid dispersal of the *lashkar*, and the punitive terms imposed were immediately complied with by the tribe as a whole. At the close of the year the Mahsud situation was on the whole promising, many of the tribe having been employed on various public works, and the experiment of recruiting Mahsuds for service in the regular army having proved a signal success. The other important political development was the rising in Khost referred to above.

As regards the internal conditions in the border territories, there is little to be said. Tribal feuds are a constant source of disturbance. The Kurram Valley,

* Cd. 4201, 1908.

† The figures are for years ending in November.

which was taken under British administration, at the request of the Turis, in 1892, was generally peaceful, and was reported to have advanced in prosperity during the decade, and the same may be said of the Daur (Tochi) Valley, the administration of which was similarly taken over in 1895. Education, in particular, has advanced. In the Kurram there were in 1912 eleven public schools, with 526 scholars, as against 7 schools with 215 scholars in 1904; in the Tochi valley, schools increased from 2 to 6, and scholars from 121 to 176 in the same period. A school was opened also at Drazinda, in the Shirani country, at the request of the inhabitants, in 1904, and beginnings have been made in the Afridi villages beside the Khyber Pass. The attendance at Drazinda has been small; in 1911–12 it was only 34, while in the Khyber there were 5 schools with 92 scholars.

In general the last decade has been one of steady progress in the work of civilisation on the frontier, and relations with the tribes have improved. On the reverse side of the shield there is the difficult question of the control of the arms traffic, which has poured thousands of weapons into trans-frontier territory. The Persian Gulf blockade, however, has had a marked effect in reducing the supply of rifles and ammunition of European manufacture to the tribesmen, and still more may be hoped for in this respect as the result of the measures recently taken by the Sultan of Muscat. A solution has still to be discovered for the old-standing Mahsud problem, though the enlistment on a considerable scale of Mahsuds in the regular army has so far been a pronounced success. The outlaw trouble also has not been permanently settled. But, allowing for these considerations, the general outlook justifies the hope that pacification and civilisation will continue to make good progress.

Chitral, Swat, and Dir.—In the northernmost of the five Political Agencies, as was remarked above, a number of organised chieftainships exist. The most important is Chitral, whose ruler is known as the Mehtar; others are the Khanates of Dir and Nawagai (comprising most of Bajaur). The two latter are divided into numerous minor khanates, held on a kind of feudal tenure by relatives of the chief khans.

The State of Chitral has an area of some 4,000 square miles and a population of about 50,000. The administration was fairly satisfactory during the decade, and the people generally peaceful and prosperous. Cultivation has been extended, and a beginning has been made with education. In 1903 a corps of scouts (the Chitral Scouts) was raised, with a view to providing an irregular force of cragsmen for the defence of the country in case of invasion. The Mehtar is Honorary Commandant of the Scouts, who number approximately a thousand. In 1910 the Mehtar formed a Council of 10 leading men to assist him in the administration.

Dir has been disturbed since the death of the late Nawab, Muhammad Sharif Khan, C.I.E., in 1904, by intermittent fighting between his sons, Badshah Khan, who succeeded, and Miangul Jan. Bajaur has been similarly disturbed by a struggle between the Nawab of Nawagai and a son, who for a time kept his father prisoner. There has also been a good deal of faction fighting in Upper Swat. Lower Swat has been peaceful, and the tribal *jirgas* there are reported to have developed into a rough but efficient engine of local self-government.

Kashmir.—The Native State of Kashmir—or Jammu and Kashmir, to give it its full title—occupies most of the northernmost portion of India. Its total area is only slightly less than that of Hyderabad, the largest of the Native States, but the population is comparatively small. The whole country is mountainous, and the northern and eastern boundaries, which contribute some hundreds of miles to the Indian frontier, run throughout their length among the high mountain levels.

Area, 84,432 square miles.
Population (1901), 2,905,578.
„ (1911), 3,158,126.
Annual revenue (approximate), £750,000.

The State is now administered by the Maharaja, H.H. Sir Partab Singh, G.C.S.I., with the assistance of Ministers. The Council to which the administration was entrusted, at the Maharaja's request, in 1887, and of which the Maharaja had been President since 1891, was abolished in 1905. The State is in direct relationship with the Government of India, which is represented by a Resident at Srinagar. The departments of finance, revenue settlement, forests, and public works are in charge of British officers, whose services are placed temporarily at the disposal of the Darbar.

The State is divided into provinces, of which Kashmir and Jammu are the most important; each of these is under a Governor. The principal feudatory under Kashmir is the Raja of Punch.

(The Frontiers and Frontier States.)

The outlying portions of the State, among which are Gilgit and Ladakh, are thinly populated and comparatively unimportant. In the north are the petty States of Hunza, Nagar, Ashkuman, Yasin, and Ghizar, and the little republic of Chilas. These States acknowledge the suzerainty of Kashmir, but do not form part of its territory. The Political Agent who is maintained at Gilgit is responsible to the Government of India for their administration. A British officer is stationed at Leh to assist in the supervision of Central Asian trade.

The bulk of the population of Kashmir are Muhammadans, though the ruling family are Hindus. The people are, as a whole, law-abiding and peaceful. More than a half of them depend upon agriculture for a living.

The reports available give evidence of substantial progress during the decade. The financial position of the State is sound, and the revenues rose from £528,000 in 1902–03 to £783,000 in 1911–12. Sericulture, which was taken up by the State in 1897, has developed rapidly. In 1911–12 the number of rearers in Kashmir and Jammu was 43,000, and silk filatures employed over 4,000 hands. The net profit on the year's working was about £49,000. In 1904 silk-weaving also was taken up experimentally; but the silk-weaving factory was not a financial success, and was closed in 1909. In 1903 the Kashmir Valley was inundated by one of the heaviest floods on record; over 5,000 houses were destroyed, and great damage was done to crops; but the loss of life was fortunately small. Another flood, on a less serious scale, occurred in 1905, when 600 houses were destroyed. In 1904 a flood spill channel above Srinagar was constructed with a view to minimising the risk of floods; and it was hoped that the danger would be still further reduced by the carrying out of a scheme for lowering a part of the bed of the Jhelum, which has since been taken in hand. Good progress has been made with irrigation; but the most important schemes of the decade, under the head of Public Works, have been those for an electrical power station on the Jhelum River, and for a railway into Kashmir. It was proposed to supply from this power station electrical energy for various State schemes (including the Jhelum dredging scheme) and for private enterprise, and possibly for working the proposed Kashmir Railway. The works were completed about 1908, and the scheme, according to the latest reports, is working very satisfactorily. The proposal for a railway to Kashmir had been under discussion for many years, the nature of the country making the question of route a difficult one. In 1905 a decision was taken in favour of a line from Srinagar *viâ* the Jhelum Valley and Abbottabad, but the project has remained in abeyance pending the consideration of further schemes, among which are proposals for lines of ropeway from Jammu to Srinagar and from Srinagar to the western borders *viâ* the Jhelum Valley. Education has advanced greatly. In 1902–03 there were 116 public schools (105 of which were in Kashmir and Jammu provinces) with 8,568 pupils. In 1912 there were altogether 287 educational institutions maintained by the State, including 2 colleges, 5 high schools, 24 middle schools, 247 primary schools, 8 girls' schools, and a normal or training school. Seventy-five new primary schools were opened during 1911–12, and a technological school was being built. Primary education is free. Among the new departures of the decade may be mentioned the creation in 1902 of a Department of Archæology and Research and a separate Horticultural Department, the appointment of a Health Officer for Kashmir with English qualifications and training, and the introduction of glycerinated vaccine lymph.

On the frontier between Kashmir and Nepal lie the Native State of Bashahr —counted as one of the Simla Hill States—and the Kangra District, in the Punjab, and the Native State of Tehri (Garhwal), and the Garhwal and Almora Districts in the United Provinces. The Native States are dealt with, along with the other States of the Punjab and United Provinces, in the second part of this chapter. The borderland lies in the Himalayas and is thinly populated. In the Kangra District are the Himalayan cantons of Lahul and Spiti, where descendants of former rulers still exercise certain powers of government. This region was the scene of the disastrous earthquake of the 4th April 1905, by which the town of Kangra and the neighbouring station of Dharmsala were destroyed.

Nepal.—Nepal, the land of the Gurkhas, extends along the northern frontier of India for about 500 miles. In the management of its affairs the State enjoys complete

freedom. The titular ruler is the Maharaja Dhiraja; the present Maharaja Dhiraja, Tribhubana Bir Bikram Jang Bahadur, succeeded in December 1911, on the death of his father, Maharaja Dhiraja Prithvi Bir Bikram Jang Bahadur. The real ruler of the country is the Prime Minister, who bears the title of Maharaja. The present Prime Minister, Maharaja Sir Chandra Shamsher, G.C.B., G.C.S.I., D.C.L., held the office throughout the period under review. A British Resident is maintained at Katmandu. No census of Nepal has been taken, but the population is estimated at about five millions. The people are of mixed origin, the great aboriginal stock being Mongolian, but the ruling classes Rajput. No detailed reports on the administration are available; the policy of the State is one of seclusion, which the Government of India are careful to respect, and the country is in many ways undeveloped. The aggregate value of the trade (exports and imports) with British India (of which a rough estimate only is possible) increased from £2,927,000 in 1901–02 to £4,535,000 in 1911–12.

The State maintains cordial relations with the British Government, and gives certain facilities for the recruitment of Gurkhas for the Indian Army. The Prime Minister paid a successful visit to England in the summer of 1908. A notable event of the decade was the prohibition, in 1908, of the sale of opium in the State. Consumers were given three years in which to abandon the habit.

Sikkim.—The Native State of Sikkim fills the gap between Nepal and Bhutan, and cuts off the Darjeeling District from Tibet. It is narrowed down towards the eastern end, where the Chumbi Valley, a part of Tibet, runs down to within 20 miles of British territory. The whole of the State is situated at a considerable elevation within the Himalayan mountain zone, and about half of the total area is uninhabitable. The State is still sparsely populated, but the census of 1911 shows a large proportional increase, partly attributable, probably, to more thorough enumeration. About two-thirds of the population are Hindus, and one-third Buddhists. A large proportion are immigrants from Nepal. The State is governed by the Maharaja, H.H. Sir Thotub Namgyal, K.C.I.E., with a Council, and with the advice and assistance of the Political Officer stationed at Gangtok; since 1906 it has been under the direct supervision of the Government of India.

Area, 2,818 square miles.
Population (1901), 59,014.
" (1911,) 87,920.
Annual revenue, £14,500.

The general condition of the State was satisfactory throughout the decade. Its financial position is sound; the gross revenue in 1911–12 was £14,500 and the expenditure £14,300. Trade with Tibet has continued small, but that with British India has increased considerably in recent years, and reached a total value of £160,000 in 1911–12. Industries are little developed. Weaving schools at Lachung and Lachen have done well on a small scale. A carpet factory at the palace, maintained by the Maharani, and since her death in December 1910 by the Maharaja, has turned out good work, but the demand in this case also is very small. An industrial school was opened in 1909, but few students have taken advantage of it. There is little serious crime, and only one small jail. The administration of justice is reported to have improved. Education is not far advanced; a second State boarding school was opened at Gangtok in 1906, and the two schools had in 1911–12 over a hundred students. There are also a number of State-aided mission schools, including four lace schools for girls. The hospital at Gangtok and the dispensaries have been used by increasing numbers of the people, and a third State dispensary was opened at Rungpo in 1908. Important measures have been taken for the preservation of the valuable forests existing in the State.

The people are reported to be in comparatively comfortable circumstances, and on the whole contented.

The Maharaja's heir, the Maharaja Kumar, spent 1907 and the first half of 1908 at Oxford, and made an extensive tour before returning to Sikkim. He was on his return entrusted with the conduct of certain branches of the administration.

Tibet.—It is unnecessary here to do more than refer to relations with Tibet. Papers regarding the appointment of a British Mission, in 1903, to negotiate with Chinese and Tibetan representatives for the better fulfilment of treaty obligations, the subsequent advance to Gyangtse, and finally to Lhasa, the signature of new agreements with the Tibetan and Chinese Governments in 1904 and 1906 respectively, and more recent

(The Frontiers and Frontier States.)

events, have been presented to Parliament.* The Chumbi Valley, which the British Government had continued to occupy as security for the fulfilment of the provisions of the Convention with Tibet, was evacuated in February 1908, and new regulations respecting trade in Tibet were agreed upon in the same year. The volume of trade fluctuates considerably, but shows an upward tendency. Figures are given elsewhere (page 295).

Bhutan.—Bhutan occupies an area estimated at something under 20,000 square miles on the southern slopes of the Himalayas. The country is thinly populated and backward, and a census has never been taken. The total population is estimated roughly at 300,000. Large numbers of Nepalese have in recent years settled in the western parts. The State formerly received an allowance of £3,333 a year from the British Government in consideration of the cession in 1865 of some areas on its southern borders. This allowance was doubled by a new treaty concluded in January 1910, by which the Bhutanese Government bound itself to be guided by the advice of the British Government in regard to its external relations, while the British Government undertook to exercise no interference in the internal administration of Bhutan. The people and their language are largely Tibetan. Formerly the two supreme authorities were, nominally, the Dharma Raja, the spiritual head, and the Deb Raja, the temporal ruler. Public affairs were in practice controlled in recent years by the Governor of East Bhutan (the Tongsa Penlop), and in 1907 the holder of this office, Sir Ugyen Wangchuk, K.C.I.E., was elected and installed as hereditary Maharaja of Bhutan. Relations with the British Government have been satisfactory throughout the decade, and the Bhotias gave strong proof of their friendly attitude on the occasion of the Tibet Mission, in 1904, when the Tongsa Penlop accompanied the British troops to Lhasa and assisted in the negotiations with the Tibetan authorities. Cultivation is backward, and there are only a few primitive industries. Crime and violence are reported to be common. The trade with British India, as noticed on page 296, showed a sudden increase in 1911-12.

Assam Border Tribes.—In the sub-Himalayan hills along the northern frontier of Assam, east of Bhutan, the principal tribes, in order from west to east, are the Akas, the Daflas, the Miris, the Abors, and the Mishmis. The Abors, whose country lies on both sides of the Dihang River, are divided into several sections, of which the Minyong, the Pang-gi, and the Padam are among the most important. On the northern part of the boundary between Assam and Burma are the Khamtis and Singphos (the latter being known in Upper Burma as the Kachins). The areas occupied by the five tribes first named are difficult of penetration and little known. The people, who are of Tibeto-Burman origin, are altogether uncivilised; different sections have from time to time in the past given trouble by raids into the plains, which have necessitated punitive expeditions. The Abors in particular have a reputation for plunder and violence, and were under blockade from 1894 to 1900. The Miris, on the other hand, have given little trouble, and large numbers of the tribe have now settled on the Assam plains. Excepting the Abors, none of these tribes gave serious trouble during the ten years under review. The Daflas were concerned in some unimportant raids, one of which was punished in 1910 by a small expedition, which burnt three villages. This was reported to have had a very salutary effect. Two sections of the Mishmis were under blockade from 1905 onwards, pending the surrender of the persons guilty of the murder of three British subjects in that year. Relations with the Abors were fairly satisfactory, and seemed to be improving, until in March 1911 they were guilty of treacherously murdering Mr. Williamson, Assistant Political Officer, Sadiya, and Dr. Gregorson, who were visiting the country at the invitation of certain headmen, with most of their followers. A punitive expedition was sent against the Abors in October 1911, friendly missions being sent at the same time to the Mishmi and Miri countries. The operations came to an end early in 1912, after the main objects of the expedition had been accomplished. The principal persons implicated in the murder of Mr. Williamson were punished, and fines were imposed on the villages directly concerned. At the same time a considerable amount of exploration and survey work was carried out, though it proved impossible to explore the valley of the Dihang up to the point where it breaks through the main mountain range on the confines of Tibet. It is hoped that relations with many sections of the Abor tribe will be improved by the completion of the mule-track, and by greater freedom of communication with the plains for purposes of commerce. The Khamtis and Singphos were well behaved throughout the decade.

* Cd 1920 and 2054 of 1904, 2370 of 1905, and 5240 of 1910.

The Nagas.—The area occupied by the Naga tribes may appropriately be dealt with here, though it does not extend to the external frontier of India. It consists of a long strip of hilly country running northwards from Manipur. Part of the country is under British administration, and forms the Naga Hills District; the tract formerly known as the "area of political control" was formally incorporated in the district in 1904, but a considerable area remains in the occupation of independent tribes. The Nagas are a Tibeto-Burman people, and for the most part may be classed as savages; they are distinguished from their relations by their devotion to the practice of head-hunting, which is still vigorously prosecuted by the independent tribes. The trans-frontier villages constantly raid one another, but apart from thefts and petty raids on the British side of the frontier, which have necessitated punitive operations on a small scale from time to time, their operations have generally been confined to the independent area, and the relations of the British administration with the tribes living near the border have in recent years been on the whole satisfactory. The year 1911-12 was in the administered area uneventful; across the frontier raiding, head-taking, and the burning of villages went on as usual.

Chin Hills.—It is usual to refer, in the part of this Statement dealing with the frontier, to the Chin Hills, a tract of mountainous country, inhabited by hill tribes, to the south of Manipur. In 1895 the hills were formally declared to be part of Burma, but some parts of the country are still not administered. In these latter areas petty raids and feuds continue frequent, and it was occasionally necessary during the decade to deal with border offences. In the administered area some progress towards civilisation is reported, and education, though as yet of an elementary nature, has gained a footing. During 1911-12 the conduct of the tribes was very satisfactory, and the internal administration was peacefully conducted. The crops were seriously damaged by a plague of rats, the resulting distress being alleviated by the grant of advances for the purchase of grain.

The North-Eastern Frontier.—The term "North-Eastern Frontier," as here used, covers the stretch of frontier from the Assam boundary to the northern boundary of the Shan States. This corner of India is for the most part included in the Myitkyina and Bhamo Districts of Burma; but over a great part of the area—the labyrinth of hills in the north—no direct administrative control is at present exercised. In the north-west corner of this unadministered area is Hkamti Long, a collection of seven small Shan principalities. The north and north-east are inhabited by the Kachins, a community of Tibeto-Burman origin, organised on a tribal basis, who have within the last few decades spread in various directions from their original home in the uplands of the extreme north. In the west they have penetrated to Assam, where they are known as Singphos, and in the east they extend across the Salween watershed, which forms the Chinese frontier. So far as the Kachins under British administration are concerned, the decade has been one of steady progress. In 1903 it was already possible to report that among them raids had ceased and cases of wounding and slaying were very uncommon. More recently it has been reported that civilisation has been making rapid progress since the advent of settled administration. The Kachins are said to be a progressive people, and the introduction of education (with which a beginning has been made on a small scale) was expected to have good results. There has also been a great improvement in recent years in the relations with the tribes in the unadministered area. At the beginning of the decade cattle-lifting and kidnapping raids, both from this area and from across the Chinese frontier, had frequently to be recorded. Latterly they have been very few, and the trans-border Kachins have become more and more friendly. In 1905 a number of chiefs from across the administrative border visited Myitkyina and expressed a desire to assist Government in its policy with regard to raiding, slavery, and opium-smuggling, and tours by British officers in their territory in 1906 and 1910 helped to develope friendly relations. Relations with the Chinese frontier officials were on the whole satisfactory throughout the decade.

The principal feature of the last two years was the despatch of expeditions into the unadministered territory, owing to systematic encroachment from the Chinese side. One visited Pienma; another Hkamti Long; a third followed the 'Nmaikha up to its confluence with the Mekh Kha. Much useful information regarding a hitherto almost unknown tract of country was obtained, and the objects of the expeditions were successfully accomplished.

The Shan States.—The Shan States are, properly speaking, not Native States, as they have been part of British India since Upper Burma was annexed, in 1886. They

were at that time subject to the Burmese crown, but administered by their own rulers, and the British Government has continued to a certain extent this semi-independence. The States are still administered by the Sawbwas or hereditary chiefs, subject to the guidance of Superintendents and Assistant Superintendents, who interfere as little as possible with the internal economy of the several States. The bulk of them lie along the eastern frontier of Burma, extending from the Bhamo District to Karenni. The Northern Shan States include Hsipaw and four minor States; the Southern Shan States Kengtung, Mongnai, Yawnghwe, and 35 minor States. In addition to these there are some outlying States. The large State of Mong Mit, north-east of the Ruby Mines district, is included in the Mandalay Division. On the eastern frontier, across the Salween, are the Wa States, consisting of mountainous country of which little is known. The control of the British Government over this tract is at present little more than nominal. The chief inhabitants are the Was. At a distance, near the north-west borders of Burma, lie the two Chindwin Shan States of Hsawnghsup and Singkaling Hkamti, and Hkamti Long, already mentioned above. The civil, criminal, and revenue administration in each State is vested in the Chief of the State, subject to the restrictions specified in the *sanad* or order of appointment granted to him. The law administered is the customary law of the States, so far as it is consistent with general conceptions of justice and does not run counter to the spirit of the law of India; at the same time the Superintendents of the Northern and Southern Shan States have a general control over the administration of criminal justice and wide revisionary powers. In revenue matters the chiefs administer their charges according to local rules and customs, which have been but slightly modified by the British Government. The total area of the Northern and Southern Shan States (excluding Karenni, Mong Mit, and the outlying states) is about 50,000 square miles, and the population about 1,300,000. The predominant race are the Shans, and the great bulk of the population are Buddhists; in the north there are a considerable number of Kachins. Mong Mit has an area of 3,562 square miles and a population of about 53,000.

During the period under review the States were, generally speaking, quiet and prosperous. There were no serious disturbances on the frontier—where relations with the Chinese, French, and Siamese border officials are friendly—and hardly any in the interior. The administration of the chiefs was generally satisfactory, and their relations with one another were good. Education, which is still mostly in the hands of Buddhist priests, made slow but steady progress, and communications were improved. There were few outstanding events, but one such, of great importance, was the commencement in 1909 of a railway from Thazi to Yawnghwe. The absence of railway facilities in the Southern States has for many years been represented as an obstacle to the development of these regions, which are thought to have considerable agricultural possibilities. The railway to Lashio, in the Northern States, was opened in 1903. A very satisfactory feature of the decade was the success of the school opened in July 1902 at Taunggyi for the sons of Shan Chiefs and members of the ruling classes. The school has been prosperous from the outset, and the number of pupils has been kept up to 70 or 80, the limit of accommodation. The boys are reported to be well conducted, and have done well at sports. It is hoped that good effects will be seen later on when they become rulers. A Government primary school opened at Lashio in 1905 has also done well. A growing interest is being taken in the development of the mineral resources of the States.

The progress of the Southern Shan States during 1911–12 was satisfactory, and the year was on the whole a prosperous one. The Northern Shan States remained unaffected by the revolution in China, and no border troubles occurred. The State of Mong Mit and the minor Shan States in the Upper Chindwin District enjoyed an uneventful and prosperous year.

Karenni.—Karenni consists of five States, with a total area of approximately 4,200 square miles and a population of about 64,000, lying on the frontier south of the Shan States. The largest State is Kantarawadi, with an area of 3,000 square miles, a population of nearly 40,000, and a gross revenue of about £8,000. More than half of the inhabitants belong to the Red Karens, a people low in the scale of civilisation. An Assistant Political Officer is posted at Loikaw as Agent of the British Government, and a certain amount of control is exercised through him over the chiefs. The principal wealth of the country is teak timber, and the considerable alien population is largely supported by the timber trade, which, however, has declined greatly in the last few years. The Karens themselves are distinguished as hunters. Frontier relations were

satisfactory throughout the decade. The most notable feature of the decade was the reorganisation of the administration in Kantarawadi undertaken by the Council into whose hands the Government of the State passed in 1909. The Sawbwa Sawlawi, on his death in 1906, was succeeded by a stepson, Hkun Nan, who also died in 1909. The succession then passed to Sawlawi's son Hkun Li, a minor, who was for a time a pupil at the school for the sons of Shan chiefs. For the time being the administration was entrusted to a Council of five members, under the direction of the Assistant Political Officer. The Council worked well, and in the following year good progress was made; the finances of the State were reduced to order, and every branch of the administration was revised. Attention was also given to the extension of agriculture, which the decline in the timber trade made vitally necessary. The affairs of the other States call for no comment. Their administration was fairly satisfactory; the chiefs, however, are ignorant and illiterate, though well-meaning and amenable to advice. In Karenni generally there has been some advance in education. Mission schools have increased in number, and the Kantarawadi Council established a lay school at Wan Mau in 1910.

South of Karenni the frontier runs between Siam and the Tenasserim Division of Burma. There are no Native States or tribal areas, and there is nothing of any importance to be recorded as regards frontier relations.

Aden and Perim.—Some reference may be made here to Aden, which is by legal definition a part of "British India," being administered by a Resident under the Government of Bombay. Attached to the settlement of Aden are the islands of Perim and Kuria Muria. There is nothing of importance to record as to the internal affairs of Aden during the decade. Relations with the neighbouring Arab tribes were generally friendly, but there were some small disturbances on the frontier in 1903–04 in connection with the proceedings of the Joint Commission appointed by the British and Turkish Governments to delimitate the boundary of the Aden Protectorate. The population increased between 1901 and 1911 from 43,974 to 46,165.

Internal States.

The States of Hyderabad, Mysore, and Baroda, and those included in the Rajputana and Central India Agencies, all of which are in direct political relations with the Government of India, are dealt with first. The remaining States are grouped by provinces, according to the local Governments with which they are in political relations.

Hyderabad.—The dominions of the Nizam constitute by far the largest and most populous of the internal States. They were ruled throughout the greater part of the period under review by Lieutenant-General H.H. Sir Mahbub Ali Khan, G.C.B., G.C.S.I., who succeeded his father as Nizam at the age of 2 in 1869, and was invested with full powers of administration in 1884. His Highness died on the 29th August 1911, and was succeeded by his son Usman Ali Khan, G.C.S.I.

A most important event in the history of the State occurred in November 1902, when the Assigned Districts of Berar were leased in perpetuity to the British Government. These districts had been administered by the British Government on behalf of the Nizam since 1853; under the treaties of 1853 and 1860, they were "assigned" without limit of time to the British Government to provide for the maintenance of the Hyderabad Contingent, a body of troops kept by the British Government for the Nizam's use, the surplus revenues, if any, being payable to the Nizam. In course of time it had become apparent that the maintenance of the Hyderabad Contingent on its old footing as a separate force was inexpedient and unnecessary, and that similarly the administration of Berar as a separate unit was very costly, while from the point of view of the Nizam, the precarious and fluctuating nature of the surplus was financially inconvenient. The agreement of 1902 reaffirmed His Highness' sovereignty over Berar, which instead of being indefinitely "assigned" to the Government of India, was leased in perpetuity at an annual rental of 25 lakhs (nearly £167,000; the rental is for the present charged with an annual debit towards the repayment of loans made by the Government of

Area, 82,698 square miles.
Population (1901), 11,141,142.
" (1911), 13,374,676.
Annual revenue (approximate), £3,000,000.
[The figures are for Hyderabad alone, excluding Berar.]

(Internal States.)

India). The Government of India were at the same time authorised to administer Berar in such manner as they might think desirable, and to redistribute, reduce, reorganise, and control the Hyderabad Contingent, due provision being made, as stipulated in the treaty of 1853, for the protection of His Highness' dominions. In accordance with this agreement the Contingent ceased in March 1903 to be a separate force and was reorganised and redistributed as an integral part of the Indian Army, and in October 1903 Berar was transferred to the administration of the Chief Commissioner of the Central Provinces. Papers on this subject were presented to Parliament in 1902,* and the new agreement was also reprinted in full in the last decennial number of this Statement.

The administration of Hyderabad is carried on, subject to the orders of the Nizam, by a Minister, with four Assistant Ministers, who together form a Council to which questions of importance are referred. A Legislative Council was established in 1893; it consists, according to the latest information available, of 21 members, including 8 non-officials. The British Government is represented by a Resident.

The great majority of the population are Hindus, though the ruling family are Muhammadan. The Nizam's Government has for many years employed a number of European officers and experts to control and supervise some of the more important branches of the administration.

Administration reports are not published annually by the Hyderabad Government. The last detailed reports available, covering a period ending in 1906, gave evidence of satisfactory general progress, but disclosed no special features calling for notice here. More recent information is available as to the finances of the State, in which there was a great improvement during the period under review. A report issued in 1910 showed that since 1901 the liquid assets of the State had increased nearly fourfold, while of the debt due to the Government of India £1,383,000 had been paid off; £856,000 remained owing on account of the Berar and famine loans of 1900. The improvement is partly due to the fact that the Guaranteed State Railways, which up to ten years ago were hardly paying their way, have of late been yielding a fair surplus profit. There has been an increase of expenditure in some departments, including Post Office and Public Works, but large reductions have been made in the strength and cost of the irregular troops. Total receipts are now normally well in excess of total expenditure. In spite of large annual grants for the construction and maintenance of roads, the lack of good roads is reported to be a serious obstacle to progress in many parts of the State. Some events of the last ten years may be noted briefly. Under the head of education, the opening of a Civil Engineering College in 1907, and of a high-class Zenana school in the following year, were recorded. In 1910 an officer of the Indian Educational Department was lent for two years to advise on the reorganisation of the educational system of the State. The report for 1906 showed that about 5 per cent. of the children of school-going age were then attending schools.

In September 1908 a sudden flood caused great damage to property and a loss of life estimated at from 3,000 to 5,000 persons in Hyderabad City and the neighbourhood. Relief measures were promptly taken in hand, the Nizam contributing £26,000 from his privy purse. In 1908, also, rules were brought into force to regulate the use and sale of cocaine by medical practitioners and chemists in the State.

In 1911 the rainfall in the State was on the whole fair, averaging 23 inches, or 13 inches less than in the preceding year. Only one district was badly affected. Plague was responsible, up to the end of 1912, for about 128,000 deaths. The disease obtained a footing in Hyderabad City in August 1911.

Mysore.—Mysore was ruled throughout the decade by the Maharaja, H.H. Sir Krishnaraja Wadiyar Bahadur, G.C.S.I., who succeeded as a minor in 1895, and was invested with full powers in 1902. In his name, and subject to his sanction, the administration is carried on by the Diwan or Prime Minister, who is assisted by two Councillors. The Government of India is represented by a Resident; and the Civil and Military Station at Bangalore is an "assigned" tract, under British administration. The State is governed on enlightened principles. The government was brought up to a high level, and the condition of the people greatly improved, during the period,

Area, 29,475 square miles.
Population (1901), 5,539,399.
" (1911), 5,806,193.
Annual revenue (approximate), £1,600,000.

* Cd. 1321, 1902.

from 1831 to 1881, for which Mysore was under British administration, and the further progress made during Sir K. Sheshadri Iyer's long tenure (1883–1901) of the office of Diwan raised the State to a condition of great prosperity. The bulk of the population are Hindus; the census of 1911 showed a considerable number (59,844) of Christians. An institution of some interest is the Representative Assembly, which dates from 1881. It consists of elected representatives of the leading ryots, merchants, and local bodies, and meets for a few days once a year at Mysore, when the Diwan delivers his annual statement of the condition of the finances and of measures in contemplation, and suggestions by the members are considered. No powers are delegated to the Assembly, and in some years (as in 1902) no meeting has been held, owing to the prevalence of plague. In 1911, when the twenty-eighth session was held, 265 members were returned, and 496 subjects of general and local interest are reported to have been discussed. A constitutional change of some importance was made in 1907, when a Legislative Council, consisting of the Diwan and two Councillors, with not less than 10 nor more than 15 nominated additional members, was brought into being. Under the law which constituted this Council, all laws except those pertaining to certain specified matters, or passed as temporary emergent regulations, have to be considered and passed by the Legislative Council before being promulgated as law under the orders of the Maharaja. Two seats on the Council are filled by the nomination of members elected from among themselves by the members of the Representative Assembly. Three meetings of the Council were held in 1911–12. The Regulations passed included one for the prevention of smoking by boys under 16 years of age.

During the period under review steady progress was made in all branches of the administration. The revenues of the State show an upward tendency. The condition of the people suffered somewhat in the first few years owing to the spread of plague, from which over 76,000 persons died in the three years 1902–04; in subsequent years the plague mortality has been lower, but a series of unfavourable seasons culminated in 1908-09 in severe distress over a great part of the State, to alleviate which extensive relief measures were undertaken. In the subsequent years, there was a recovery of agricultural prosperity. It was reported in 1910 that there had been in recent years a general rise in the standard of living among all classes throughout the State. The year 1911–12 was unfavourable and the crops poor, but there was no severe distress, though prices were high. With a view to helping agriculturists with their cattle, a regularly organised veterinary department was inaugurated in 1906. An agricultural department, well equipped with scientific experts, was in existence throughout the decade. The agricultural banks established from 1895 onwards, of which 61 were in existence at the beginning of the decade, were not a success, and on the 30th June 1912 only six were left. On the other hand, good progress has been made under a Regulation passed in 1905 to provide for the establishment and control of co-operative societies in Mysore. Five societies were registered during the first year, and the numbers have grown rapidly; in 1908 a central co-operative bank was started, with the object of financing outlying societies, and in 1912 there were altogether 208 societies, 98 of which were registered during the last year.* Under the heads of industry and commerce, progress has been made in various directions. There has been a steady output of gold to the value of over £2,000,000 a year, and the mining of manganese and chrome ores has also been taken up, but has fallen off owing to a fall in prices. In 1911, with the object of creating and keeping alive public interest in matters connected with the economic progress of the State, and in order to associate public-spirited citizens, prominent agriculturists, and merchants with the officers of Government in deliberations on the subject, the Maharaja ordered the holding of an annual Economic Conference. The first conference, held in June 1911, discussed various questions, which were referred to three committees, for education, agriculture, and industries respectively, for the preparation of schemes to be placed before the next conference. The committees are reported to have done good work during 1911–12. An industrial survey of the State has been sanctioned.

The educational system of the State has been maintained at a high level, and the number of schools and scholars has grown steadily. In 1911-12 there were 2,567 public colleges and schools and 1,911 private schools, with a total of 124,000 boys and 25,000 girls on the rolls. These figures represented about 30 and 6 per cent. respectively of the male and female populations of school-going age. In 1908 primary education,

* For more detailed figures, *see* page 253.

which was free in village elementary schools, was made free in all the schools of the State. The educational facilities include night schools for illiterate artisans and labourers, a number of industrial schools, an engineering school, and three commercial schools. Expenditure to the extent of about £200 is reported annually under the head "Encouragement to Authors."

In 1907 a department of public health was constituted, with a Sanitary Commissioner and a staff of divisional and district sanitary officers and inspectors. Good progress has been made in regard to drainage and water supplies. Mention may be made of the successful working during the decade of the Cauvery Falls Power Station, the first electric power works installed in India. The plant was taken over by the Mysore Government in 1903, and has since been extended. In 1909 a separate electrical department was formed under a chief electrical engineer.

Baroda.—The territories of Baroda consist of five or six larger and a considerable number of smaller separate areas rather widely scattered in Gujarat and Kathiawar. For the purposes of administration, these areas are grouped into four districts. H.H. Sir Sayaji Rao Gaekwar, G.C.S.I., ruled throughout the decade. The administration is carried on by an executive council consisting of the principal officers of the State, subject to the control of the Maharaja Gaekwar, who is assisted by a Diwan and other officers. The Government of India is represented by a Resident. Previous to 1908 there was no special legislative machinery; Bills were passed into law under the orders of the Maharaja, after publication in the official Gazette and the consideration of criticisms. In 1908 a legislative council of 17 members was constituted: eight of the members were officials, six were appointed on the recommendation of the district local boards, and three nominated by Government to represent special interests. The latest administration report available is for the year ending in July 1911. The financial position of the State was satisfactory throughout the period under review. More than half of the total receipts being, in an ordinary year, derived from land revenue, there is considerable fluctuation according to the character of the season. At the beginning of the decade the State was recovering from three years of famine and scarcity. In 1904 the rains failed again, but the fact that there was a sufficiency of fodder mitigated the distress, and prompt and effective measures of relief were taken. Relief measures became necessary also in 1911-12.

Area, 8,099 square miles.
Population (1901), 1,952,692.
" (1911), 2,032,798.
Annual revenue (approximate), £1,100,000.

Since 1902 there has been marked progress in various directions, and particularly under the heads of local self-government and education. In 1905 provision was made for the constitution of *panchayats* in all villages, half of the members being elected by the cultivators; they were entrusted with the supervision of village roads and wells, and with other duties. At the same time a board, partly elective, was established in each *taluka* and in each district, and a number of the more important towns were provided with municipalities with large independent powers. The attendance at local board meetings is not very satisfactory, but it is reported that there is keen competition for election to municipalities.

The Gaekwar has shown great interest in education, and notable advances have been made. In 1904 an Act was passed to provide for the extension to other parts of the State of the system of free compulsory education (up to a certain standard) that had been in force experimentally in one *taluka* since 1893, and in the following year it was decided to extend the system accordingly to all parts of the State, excepting certain very backward tracts. The number of schools was greatly increased in the next few years, special grants being made to some villages whose local boards were unable to open schools for want of funds. The ages between which attendance is compulsory are 7 to 12 for boys, and 7 to 11 (7 to 10 previous to 1909) for girls; exemption is allowed on various grounds. At the end of 1910–11 there were 6,906 students in 41 English teaching institutions and 178,571 in 2,985 vernacular schools. The number of girls attending different schools was 54,497.

There are various special schools, including four music schools. The expenditure from State funds on education increased from £42,650 in 1902–03 to £92,421 in 1910–11. The experiment in free compulsory education has created widespread interest; its working is not entirely free from difficulty, as the following extract from the Administration Report of the State for 1909–10 indicates: "While it is by no means an "assured success, it is a praiseworthy attempt, with an excellent chance of final

"success if money is freely spent, and vigilance ceaselesslyexercised. . . There "can be no doubt that half the girls who ought to go to school under the law do not "do so, and that a good many boys, too, manage to escape." The report for 1910–11 states that the Education Department is under orders to open primary schools wherever it is possible to gather together 15 children, and that on this basis no village with a population of 100 souls will long remain without a school, save under exceptional circumstances. The paucity of teachers and want of buildings are difficulties in the way. In 1909 an Education Commission was appointed to inquire into all questions pertaining to education. As a result of one of its recommendations, the minimum pay for teachers was raised to Rs. 10 a month (£8 a year).

Agriculture has been helped by means of seed depôts, by the employment of specialists, and by various arrangements for instruction and demonstration. Three agricultural banks were established in 1899 and subsequent years, and two organised in 1910–11 brought the total to five; their operations have been on a rather limited scale, the working capital in 1912 amounting to £11,300. Considerable progress has, however, been made under a Co-operative Credit Societies Act passed in 1905; at the end of 1911–12 there were 122 societies, with 2,815 members, and a working capital of over £13,000.

Manufacturing industries have made some progress. The State cotton-spinning and weaving mill was sold to a company in 1905, and various other companies have been floated. In 1906 an Economic Adviser was appointed, and the Bank of Baroda, subsidised by the State, was opened in 1908. A geological survey of the State from an economic point of view was carried out in 1908, but no very notable result was reported.

Mention should be made of the Infant Marriage Prevention Act, a tentative measure of social reform passed in 1904, which fixed 12 as the minimum age of marriage for girls. The Act made provision for exemptions, of which advantage has been taken in large numbers of cases, and offences have been very leniently dealt with. The latest report is to the effect that infant marriage among the higher classes is on the decline, but that the Act does not appear to be attaining the object of checking infant marriage among the lower classes. A notable achievement also was the codification of the Hindu law in a series of Acts, the last of which was passed in 1911. A City of Baroda Improvement Act, embodying principles of sanitary science, and a Press Act, dealing with sedition and the propagation of scurrilous literature, were passed during 1910–11.

The State is on the whole well supplied with railways; different portions are traversed by the Bombay, Baroda, and Central India and Rajputana-Malwa Railways, and there are also a number of lines built by the State.

In 1907 the annual grant for irrigation was increased to £2,666, and a permanent establishment for supervising the works was sanctioned. As regards taxation, notable advances were the substitution of an income tax in 1904 for a large number of petty imposts, and a progressive simplification of the customs tariffs, culminating in 1909 in the abolition of export, import, and octroi duties, except at the ports.

Measures were taken in the early years of the decade for the more complete separation of judicial and executive functions, and executive officers have since 1904 been almost entirely relieved of magisterial duties. As in British India, the working of the police has been unfavourably commented on, and it was noted in the State's Report for 1909–10 that "the problems facing the police administration are even "more serious in Baroda than they are in British India." The view was expressed that no great improvement could be hoped for until a raising of the standards of public morality and duty might make the people less ready to institute false cases and readier to co-operate with the police. Difficulty is found in attracting suitable recruits.

Rajputana Agency.—Rajputana includes 21 Native States, three of which, of somewhat lower status, are distinguished as "chiefships." In their midst is the British "province" of Ajmer-Merwara. The Government of India is represented by the Agent to the Governor-General in Rajputana, whose headquarters are at Abu, in Sirohi. Under him are three Residents and two Political Agents, whose respective charges are shown in the table below. Rajputana has, by virtue of its inhospitable deserts and the protection of the Aravalli Hills, given shelter to the most ancient Hindu houses. The period preceding the establishment of British suzerainty witnessed many changes in the territorial arrangement of the Rajput clans and dynasties, but only

(Internal States.)

	Area.	Population.		Annual Revenue (approximate).
		1901.	1911.	
Mewar Residency:	Square miles.			£
Udaipur (Mewar)*	12,756	1,030,212	1,293,776	176,000
Banswara	1,606	149,128	165,463	15,000
Dungarpur	1,447	100,103	159,192	16,000
Partabgarh	886	52,025	62,704	18,000
Shahpura (Chiefship)	405	42,676	47,397	18,000
Kushalgarh (Chiefship)	340	16,222	22,005	3,000
Jaipur Residency:				
Jaipur	15,579	2,658,666	2,636,647	533,000
Tonk	2,553	273,267	303,181	130,000
Kishangarh	858	90,970	87,191	56,000
Lawa (Chiefship)	19	2,671	2,564	2,000
Western Rajputana States Residency:				
Jodhpur (Marwar)	34,963	1,935,565	2,057,553	440,000
Bikaner	23,315	584,755	700,983	220,000
Sirohi	1,964	154,544	189,127	34,000
Jaisalmer	16,062	73,370	88,311	14,000
Eastern Rajputana States Agency:				
Alwar	3,141	828,487	791,688	232,000
Bharatpur	1,982	626,665	558,785	210,000
Dholpur	1,155	270,973	263,188	80,000
Karauli	1,242	156,786	146,587	40,000
Haraoti Ageney:				
Bundi	2,220	171,227	218,730	46,000
Kotah	5,684	544,879	639,089	224,000
Jhalawar	810	90,175	96,271	32,000
Total	128,987	9,853,366	10,530,432	2,539,000

* Including small areas (62 square miles in all) belonging to Gwalior and Indore.

the two Jat States of Bharatpur and Dholpur and the Muhammadan principality of Tonk represent the intrusion of rulers of alien race. The bulk of the inhabitants are Hindus in all the States except Banswara, Dungarpur, and Kushalgarh, where Animists are in the majority. The Rajputs numbered in 1911 687,000, of whom 54,000 were Musalmans.

The administrative arrangements of the different States vary considerably; speaking generally, the central authority is in the hands of the chief himself, and, when he has a turn for government, his superintendence is felt everywhere. He is usually assisted by a Council, or by a Diwan or Kamdar.

The country is divided by the Aravalli Hills, roughly speaking, into a north-western portion, sandy, ill-watered and unproductive, and passing in the far west into mere desert, and a south-eastern portion containing the higher and more fertile regions. Jaisalmer, almost entirely a sandy waste, is the most thinly-populated area in India, and large parts of Bikaner and Jodhpur, the other States on the same side of the dividing line, share the same physical characteristics.

Rajputana has been specially subject to famine from the earliest times, and the history of the last decade is largely occupied with the progress made towards recovery from the effects of the great famine of 1899–1900, which, apart from its disastrous effects on the people, placed a great strain on the financial resources of the States. Famine conditions again prevailed in parts of four States in 1902–03, and a more serious failure of the rains necessitated relief measures in ten States in 1905–06. Scarcity was reported in some parts also in 1904–05, 1907–08, and 1911–12. These further misfortunes helped to retard recovery, and the finances of several States remained in an unsatisfactory condition throughout the decade, while in other cases little money could be spared for suggested measures of reform. Since 1900 increased attention has been paid in almost every State to the subject of irrigation, and investigations have been undertaken in the greater part of Rajputana, at the expense of the Government of India and under the supervision of European engineers, with the object of drawing up projects for utilising to the best advantage all available sources of water supply.

Rajputana suffered severely from plague in 1904 and 1905, and again in 1910 and 1911. The total number of deaths reported up to the end of 1912 was about 132,000.

There was, nevertheless, an increase of nearly 7 per cent. in the total population between 1901 and 1911, as compared with a decrease of 19 per cent. in the previous decade.

Education is backward, though progress is being made. In 1901, taking the population of Rajputana as a whole, 62 males and 2 females out of 1,000 of either sex could read and write. In 1911 the proportion of "literates" was rather higher for females, but slightly lower for males.

The Nagda-Muttra Railway, which runs mainly in Rajput territory, was opened in 1909.

Udaipur (Mewar).—The Udaipur family is the highest in rank and dignity among the Rajput chiefs of India. The Maharana, H.H. Sir Fateh Singh Bahadur, G.C.S.I., who was installed in 1885, ruled through the decade. The period was one of a gradual return to prosperity after the famine of 1899-1900. The administration is said to suffer from over-centralisation. A notable event was the decision of the Maharana in 1904 to create a separate Irrigation Department, with an annual grant of £5,000. The department is reported to have done good work since. Education is backward, and not much progress has been made. In 1902-03 there were 41 State schools, with 2,864 scholars; in 1909-10 the respective numbers were 49 and 2,915. A squadron of Imperial Service Cavalry was raised in 1911-12. The people are contented, and the finances of the State are in a satisfactory condition.

Jaipur.—The Maharaja, Colonel H.H. Sir Madho Singh Bahadur, G.C.S.I., G.C.I.E., G.C.V.O., LL.D., has ruled since 1882. In respect of population, wealth, and general prosperity, Jaipur is the leading State in Rajputana, and good use is made of the available resources in extending public works—both railways and irrigation—and education. The Medical Department of the State is also noted for its excellence and efficiency. The people are generally prosperous and contented. The failure of the rains in 1905 caused some distress, to relieve which adequate measures were taken.

Jodhpur (Marwar).—H.H. Sir Sardar Singh Bahadur, G.C.S.I., Maharaja of Jodhpur, died in March 1911, and was succeeded by his son Sumer Singh, who, being a minor, has not yet been invested with ruling powers. The State started the decade with a heavy debt, partly resulting from the famine of 1899-1900. This was cleared off by 1908, and a famine fund has been constituted, which in 1911 amounted to £170,000. The administration has been improved, and a great increase of trade in the last few years is recorded. Education has received some attention. The Darbar provides education of all grades free of cost. There were in 1911 over 6,000 pupils on the rolls of State and aided schools. During the minority of the present chief, the administration is in the hands of an Executive Council, working under the general control of the Resident in the Western Rajputana States. Major-General Maharaja Sir Partab Singh, G.C.S.I., K.C.B., A.D.C., late ruler of Idar, has been appointed Regent and President of the State Council.

Bharatpur.—The Maharaja, H.H. Sawai Kishan Singh Bahadur, was born in 1899, and succeeded in 1900, when his father was deposed. The State is administered by a Council under the supervision of the Political Agent. Steady progress in most departments is recorded. The distress following on the failure of the rains in 1905 and 1907 was promptly met by relief measures and suspensions of revenue. The finances are in a satisfactory condition.

Bikaner.—H.H. Sir Ganga Singh Bahadur, G.C.S.I., G.C.I.E., ruled throughout the period under review, which was one of prosperity and progress. The State was fortunate in having good crops in 1905-06, when scarcity was so prevalent. Education is backward, but has been receiving special attention. In 1909 commercial and telegraphic training schools were opened. In 1910 the offer of a regiment of Imperial Service Infantry was accepted by the Government of India.

Kotah.—The Maharao, H.H. Sir Umed Singh Bahadur, G.C.S.I., G.C.I.E., has exercised full powers since 1896. The State has recovered from the temporary financial embarrassment following the famine of 1899-1900, and steady progress in all branches of the administration is reported. The recurrence of agricultural distress

(Internal States.)

in 1905–06 was met by adequate measures of relief. The police force has been reorganised and education has made some advance, the report for 1911–12 showing 66 schools, with 4,526 pupils.

Alwar.—At the beginning of the decade the administration was in the hands of the State Council. The Maharaja, H.H. Sir Jai Singh Bahadur, K.C.S.I., K.C.I.E., was invested with ruling powers in December 1903. The condition of the people and the finances of the State have been generally satisfactory. Energetic measures were taken to meet the famine conditions of 1905–06.

Of the remaining States, four, the chiefs of which were minors, were in 1902 being administered by the State Councils or selected officers under the immediate supervision of the Political officers. These arrangements continued in Dholpur and Kishangarh up to 1905, in Jaisalmer up to 1908, and in Dungarpur up to 1909. The young chiefs meanwhile underwent training in the shape of education at the Mayo College or service in the Imperial Cadet Corps, and opportunities were taken, so far as circumstances admitted, to introduce improvements in the administrative systems of the States. Good progress was reported in Dholpur, and also in Jaisalmer, which towards the end of the decade was free from debt for the first time for many years. Dholpur again came under the administration of the State Council, with a Superintendent, in 1911, on the sudden death of the Maharaja. Tonk and Banswara called for the special attention of Political officers early in the decade, by reason of maladministration and debt, and financial difficulties have been much felt also in Partabgarh. The Maharawal of Banswara died in 1905, and his son, who succeeded, abdicated his powers of administration in 1908 in favour of his eldest son. The administration has been carried on under the direct supervision of the Political Agent. Karauli suffered severely from scarcity in 1905–06, and it became necessary for the Government of India to assist by lending both men and money; the financial position has continued to be a source of anxiety.

Central India Agency.—The Central India Agency includes altogether some 150 Native States, of which the more important are shown in the table below. Most of the ruling chiefs of this part of India are of modern origin, dating their rise from the anarchy of the 18th century. The rulers of Gwalior, Indore, and Dhar trace their descent from Maratha commanders, while those of Bhopal and Jaora, on the other hand, are of Afghan origin. The other States shown in the table are ruled by Rajput chiefs. The bulk of the population in all cases are Hindus. The territories of the different States are much divided and intermingled, and the political relations of the States with the Government of India, and with one another, are very varied. Eleven chiefs have direct treaty engagements with the British Government, and 31 have *sanads* from that Government confirming them in the possession of their States, under certain conditions as to powers of administration. The remaining minor States and estates are "mediatized" or "guaranteed," under conditions that differ in almost every case. The whole area is divided by a strip of British territory, which separates Central India proper, on the west, from Bundelkhand and Baghelkhand on the east. The Agent to the Governor-General is stationed at Indore, and has under him Residents at Gwalior and Indore, and Political Agents for Baghelkhand, Bundelkhand, Bhopal, Bhopawar, and Malwa.

—	Area.	Population.		Annual Revenue (approximate).
		1901.	1911.	
	Sq. miles.			£
Gwalior*	25,107	2,940,593	3,093,082	905,000
Indore*	9,469	850,608	1,004,561	420,000
Bhopal	6,902	667,350	730,383	200,000
Rewa	13,000	1,326,802	1,514,843	187,000
Orchha	2,079	321,678	330,032	50,000
Datia	911	173,905	154,603	33,000
Dhar	1,783	142,115	154,070	56,000
Jaora	568	77,040	75,951	50,000
Panna	2,596	192,986	228,880	33,000
Chhatarpur	1,118	156,139	166,985	30,000
Charkhari	880	123,954	132,530	33,000
Minor States	12,954	1,524,635	1,771,060	500,000
Total	77,367	8,497,805	9,356,980	2,497,000

*Excluding 26 square miles belonging to Gwalior and 37 square miles belonging to Indore which lie in the Rajputana Agency.

(Internal States.)

The greater part of the western half of the Central India Agency lies on the Malwa plateau, highly-cultivated and famous for its fertility; the eastern lower-lying areas are, generally speaking, only moderately fertile. The bulk of the population is essentially agricultural. The crops are almost entirely dependent on the rainfall, there being no general or extensive system of artificial irrigation. As in Rajputana, the effects of the great famine of 1899–1900 continued to be felt in the period under review. There has been no distress on the same scale since, but there was scarcity, amounting to famine in some parts, in 1902–03, and in 1905–06 famine again made its appearance in the north of Gwalior and over a great part of the Bundelkhand Agency. The arrangements made in the latter case were on the whole excellent; there was believed to be no loss of human life from actual starvation, but live-stock suffered severely, the loss being estimated at something like a third or a half. There was some distress also in 1907–08 and in 1911–12, but prompt measures averted serious results, and sufficient supplies were generally available for cattle. A general survey of the possibilities in the direction of protective irrigation was made in the course of the decade, works projected in connexion with which may be expected to provide employment in future famines. A noticeable feature in recent years has been the increasing cultivation of wheat and cotton; the average areas under the two crops in the ten years ending 1904–05 were 2,340 and 1,025 square miles respectively; in 1911–12 there were some 4,400 square miles under wheat and over 2,000 square miles under cotton. In Malwa the cultivation of the poppy has hitherto been of great economic importance; in 1902–03 the crop was grown over 237 square miles. The agreements with China had not up to the end of the period under review affected the Malwa opium trade to any great extent, the diminution in the total export from India to China having been effected at the expense of the Bengal branch of the trade.

Plague appeared in Central India on a serious scale for the first time in 1903. The total number of deaths in 1903 and 1904 was over 52,000; in subsequent years the mortality has fluctuated, but has been on a much lower scale. The total number of deaths up to the end of 1912 was 109,000. The increase of over 10 per cent. in the total population between 1901 and 1911 was in marked contrast with the decrease of over 16 per cent. in the preceding ten years.

The methods of administration vary. Most chiefs exercise their authority through a Diwan or Minister. In cases of gross maladministration, or of a minority, the control is vested in the Political Officer, the direct management being in the larger States entrusted to a Minister and Council and in small States to a Superintendent. In criminal cases, full powers of life and death are held only by the most important chiefs, the smaller chiefs, except when special authority is granted, being required to submit all heinous cases to the Political officer. Of the total revenues of the States, rather more than a half is derived from land revenue and cesses.

Education has made great advances in the last twenty years, but the standard reached varies very greatly in different States. Gwalior, Indore, and Bhopal are fairly well provided with schools. The conditions in the eastern States are, generally speaking, less advanced, and Rewa is still very backward in the matter of education.

Gwalior.—The present ruler of Gwalior, H.H. Maharaja Madho Rao Scindia, G.C.S.I., G.C.V.O, A.D.C., succeeded in 1886. The administrative machinery of the State is controlled by the Maharaja, assisted by a board of members in charge of the different departments of the administration. The northern half of the State was visited by famine in 1905–06; the situation was energetically and liberally dealt with, large remissions of land revenue and *takkavi* advances being made. The Maharaja Scindia devotes much attention to the Education Department, and has always shown a special interest in the spread of education among girls. The improvement of sanitation and water-supply in his capital is also mentioned among the matters to which His Highness has given special attention.

In 1911 there were 372 educational institutions maintained wholly by the State, including 11 girls' schools, besides a number of self-supporting schools. The number of pupils in the State schools was returned as 21,022.

In 1904 a technical and industrial institute was opened, as part of an effort to resuscitate local handicrafts and to improve trade and manufactures. Technical education has been reported since to be making excellent progress, and the number

(Internal States.)

of factories, among which cotton-ginning factories predominate, has grown considerably. A Board of Commerce and Industry was constituted in 1906, and a factory inspector appointed in the following year, among whose duties was the development of cottage industries by the introduction of improved hand machines. A new Code of Civil Procedure, intended to remedy complaints against the procedure of the Courts, and to provide a simpler and better procedure for the execution of decrees, was brought into force during 1911.

Indore.—H.H. Maharaja Shivaji Rao Holkar, G.C.S.I., abdicated in January 1903 in favour of his son Tukoji Rao Holkar, who was then 12 years old. The young Maharaja, after completing his education at the Mayo College and spending a short time in the Imperial Cadet Corps, was invested with ruling powers in November 1911. The State was administered during the interval by a Council of Regency, under the supervision of the Resident. Many administrative reforms were carried into effect during the decade. In 1903 the State currency was converted into British coin, to the great benefit of the trading classes. Important measures were taken to ameliorate the condition of the ryots. A number of customs duties were abolished or reduced. The police force was reorganised, and a police training school for officers and men established. Education has made satisfactory progress. Indore City suffered very severely from plague in 1903; and there was widespread famine in 1907–08. The total expenditure on relief (including remissions and suspensions of land revenue) was about £120,000; the death-rate was not abnormal, and no deaths from starvation were reported.

Bhopal.—Bhopal, the principal Muhammadan State in Central India, has for more than 60 years been under female rule. The present ruler, H.H. Nawab Sultan Jahan Begam, G.C.S.I., G.C.I.E., C.I., succeeded her mother in 1901. Her Highness personally directs the administration of the State. In 1909 a State Council was formed to advise on such matters as might be laid before it. During the period under review, steady progress was reported. Education especially received attention. In 1911–12 the Begam's offer of a regiment of Imperial Service Infantry was accepted.

Rewa.—The Maharaja of Rewa, H.H. Sir Venkat Raman Singh Bahadur, G.C.S.I., who succeeded in 1880 at the age of 3, has kept up the improved methods of administration introduced during his long minority. The State suffered from famine and scarcity in 1907–08, but measures of relief were undertaken with marked success. Education is somewhat backward. In 1909–10, the last year for which figures are available, there were 51 State schools, with about 3,500 pupils on the rolls.

As regards the smaller States, a notable event was the deposition of the Maharaja Madho Singh of Panna in April 1902 as a result of an inquiry into the circumstances attending the death of his uncle, the heir-presumptive. He was succeeded by Kunwar Jadvendra Singh, during whose minority the administration was placed in the hands of a Diwan, with a Council, under the supervision of the Political Agent. Other important States that were under administration during minorities were Dhar, up to 1907, and Jaora, up to 1906.

Madras States.—The area, population, and approximate revenue of the five States in political relations with the Government of Madras are shown in the marginal table. There is a Resident in Travancore and Cochin; for the other three States Collectors are normally *ex-officio* Political Agents.

	Area.	Population.		Annual Revenue (approximate).
		1901.	1911.	
	Square miles.			£
Travancore - -	7,129	2,952,157	3,428,975	761,000
Cochin - -	1,361	812,025	918,110	254,000
Pudukkottai - -	1,178	380,440	411,886	101,000
Banganapalle - -	255	32,264	39,344	17,000
Sandur - - -	161	11,200	13,526	6,000
Total - -	10,084	4,188,086	4,811,841	1,139,000

Travancore.—The State of Travancore includes some of the most beautiful and fertile country in Southern India. It is largely mountainous, and, in the north, very well provided with rivers and streams. Two-thirds of the population are Hindus; of the remaining third, a large majority (903,868) are Christians. The State thus contains nearly a quarter of the total Christian population of India. About 60 per cent. of the population are dependent on agriculture, the coco-nut tree being the main source of

agricultural wealth. Famines of the severe type experienced elsewhere in India are unknown. Nearly one-half the total area is forest. The State, like the other Native States in Madras, has hitherto been free, or practically free, from plague. H.H. Maharaja Sir Bala Rama Varma Bahadur, G.C.S.I., G.C.I.E., who succeeded in 1885, continued to rule with marked success throughout the period under review. The administration is conducted under the authority of the Maharaja by a Diwan. A Popular Assembly, which now includes a large proportion of elected members, was constituted in 1904, to assist in ascertaining public opinion on administrative questions. It meets for a few days once a year. A Legislative Council, including a proportion of non-officials, has been in existence since 1888. The inhabitants are, generally speaking, very peaceable and law-abiding.

The decade was one of increasing prosperity and steady progress in various directions. The total revenue of the State, which in 1902–03 was £669,000, the highest recorded up to that date, in 1911–12 amounted to £918,000. The financial position is thoroughly satisfactory. The Maharaja is reported to take a keen interest in all matters affecting the well-being of his subjects, and the administration is maintained at a high level. The State takes a leading place in the matter of education. In 1912 there were 1,698 schools "recognised" under the Education Code introduced in 1910, with 178,775 scholars, including 49,208 girls. The returns for "unrecognised" schools, which are under no control, and are mostly of a low type, are unreliable. They showed a total of 51,000 pupils in 1912; the number of such schools is being steadily diminished. A system of school-leaving certificates was introduced in 1910. Industries and trade show considerable expansion. During the decade the number of factories increased from 41 to 76 and the number of hands employed from 4,322 to 5,981. There was also a large increase in the number of joint stock companies and in the volume of external trade. The various products of the coco-nut tree make up considerably more than half the total exports.

A notable event was the completion in 1906 of the main dam of the Kothayar irrigation scheme, which up to that time had cost some £270,000 and had been 9½ years in construction. This scheme was projected for the benefit of the southern portion of the State, in which alone artificial irrigation is necessary. It is expected finally to irrigate some 64,000 acres of land. In 1912, water was provided for 39,000 acres; £430,000 had been spent on the project up to date.

The State is traversed by the Quilon-Tinnevelly Railway, opened in 1904.

Cochin.—Cochin consists of two disconnected parts, the smaller, called Chittur, lying to the north-east of the main area; there are also a few small isolated tracts encircled by Travancore territory. The State consists of three well-defined parts—the hills, in the east, covering nearly half of its total extent, with magnificent forests; the plains, closely cultivated; and the seaboard, densely covered with coco-nut palms. The rainfall is heavy, and famine is practically unknown. As in Travancore, about two-thirds of the population are Hindus, and there is a large Christian element (233,092 in 1911). Agriculture and occupations connected with the coco-nut support the majority of the people. H.H. Sir Rama Varma, G.C.S.I., G.C.I.E., who succeeded as Raja in 1895, ruled throughout the period under review, and continued to show himself an enlightened and progressive ruler. Steps have been taken to develope the valuable forests in the State, and the Forest Steam Tramway, an important work, was opened in 1905. The Shoranur-Cochin Railway was opened in 1902. Between 1907 and 1910 most of the departments of the administration were overhauled and improved. The Education Department was reorganised in 1907–08, and in the same year a Department of Public Health and a small Agricultural Department were formed. A Fishery Department was formed in 1910. A revision of the land-revenue settlement was completed in 1908, with the result that the total land revenue demand was increased by over £20,000. Education is well provided for; in 1902–03 there were altogether 1,491 schools with 47,315 pupils, including 13,656 girls. An Education Code was introduced in 1911, and the educational system was reorganised. The introduction of a higher standard of efficiency resulted in a reduction in the number of schools and pupils; in 1912 there were 47,209 pupils under instruction, including 14,615 girls. A Government technical and industrial school was opened in 1910. Primary education was made free for girls and for the backward classes throughout the State in 1908, and is now free for all pupils. At the recent census 243 in every 1,000 males and 61 in every 1,000 females were returned as literate. A scheme for associating the people with the work of administration has been under discussion.

(Internal States.)

Pudukkottai.—The health of the Raja of Pudukkottai, H.H. Martanda Bhairava Tondiman, has in recent years led to prolonged visits to Europe, and since 1909 the administration has been entrusted to a Council of State of three members, with an officer of the Indian Civil Service as President. A Representative Assembly of 30 members was constituted in 1902; since 1907, 18 of the members have been elected, but it was noted that so little interest was displayed in the last elections, in 1910, that in some electoral divisions no one appeared to register a vote. The Assembly meets for two or three days once a year. An account of the administration is laid before it, and members are allowed to ask questions and make suggestions. The administration of the State was on the whole satisfactory during the decade. Various departments were reorganised. The State is agricultural, and depends on a somewhat precarious rainfall. Several bad seasons were experienced, and in 1909-10 some measures of relief were necessary. Attention is now being given to irrigation works, which have suffered by neglect A veterinary hospital, which is reported to have done useful work, was opened in 1907. A considerable increase in the number of schools and scholars was reported in 1908 and 1909. In celebration of the Imperial visit to India the tax on weavers' looms was abolished, and free elementary education was extended to all parts of the State outside the town of Pudukkottai.

Banganapalle.—In consequence of his continued mismanagement and disregard of repeated warnings, the Nawab of Banganapalle, Saiyid Fateh Ali Khan, was removed from the direct administration of the State in February 1905, and its management was entrusted to an Assistant Political Agent under the Government of Madras. The Nawab died shortly afterwards and was succeeded by his son, Saiyid Ghulam Ali Khan, who was formally installed in December 1908. During the interval various reforms were introduced into the administration. An advance, in the last few years, under the head of education is recorded.

Sandur.—The administration of the Sandur State was throughout the decade in the hands of a Diwan, under the control of the Political Agent, the chief being a minor. There has been a notable development of manganese mining.

Bombay States.—More than a half of the total number of the very various units counted as Native States in India are under the Government of Bombay. The characteristic feature of the Bombay States is the great number of petty principalities; the peninsula of Kathiawar alone contains nearly two hundred separate States. The recognition of these innumerable jurisdictions is due to the circumstance that the early Bombay administrators were induced to treat the *de facto* exercise of civil and criminal jurisdiction by a landholder as carrying with it a quasi-sovereign status. As the rule of succession by primogeniture applies only to the larger principalities, the minor States are continually suffering disintegration. According to the most recent lists the total number of the Bombay States is about 360. Between them they occupy some 64,000 square miles—more than a third of the total area of the Bombay Presidency, though they contain considerably less than a third of the total population. In Bombay, as in Central India, there are to be found everywhere the traces of disintegration and disorder left by the eighteenth century. In no part of India is there a greater variety of principalities. The bulk of them are of modern origin, the majority having been founded by Marathas in the general scramble for power in the middle of the eighteenth century, but several Rajput houses date from earlier times. Interesting traces of ancient history are to be found at Sachin, Janjira and Jafarabad, where chiefs of a foreign ancestry, descended from Abyssinian admirals of the Deccan fleets, still remain. A few aboriginal chiefs, Bhils or Kolis, exercise an enfeebled authority in the Dangs and the hilly country that fringes the Mahi and the Narbada rivers.

The control of the Bombay Government is exercised through Political Agents, whose positions and duties vary greatly. In some of the more important States their functions are confined to the giving of advice and the exercise of a general surveillance; in other cases they are invested with an actual share in the administration; while States whose rulers are minors—and the number of these is always large—are directly managed by Government officers. Some of the States are subordinate to other States, and not in direct relations with the British Government; in these cases the status of the feudatories is usually guaranteed by Government. The powers of the chiefs are regulated by treaty or custom, and range downwards to a mere right to collect revenue in a share of a village, without criminal or civil jurisdiction, as in the case of the petty chiefs of Kathiawar.

(Internal States.)

Some particulars of the more important States are given in the tabular statement below, in which the States are grouped according to their geographical positions. The North Gujarat States form the most important group, and account for more than two-thirds of the total area. The South Gujarat States, which lie to the south of the Tapti, are comparatively unimportant. The Maratha States fall into four groups. The North and South Konkan groups lie below the Ghats to the north and the south of Bombay respectively, while the Deccan and Southern Maratha Country States are situated in the southern and eastern portions of the Deccan plateau. In view of the wide geographical distribution of the States, they may most appropriately be dealt with group by group, and it is impossible here to attempt more than a very brief account of their progress and condition, with special reference to any events of importance in the larger States. Speaking generally, the period under review was, as in Rajputana and Central India, one of gradual and intermittent recovery from the famine of 1899–1900. In the Native States, as in British districts, the condition of the people depends chiefly on the state of the crops. Only Kathiawar, Cutch, Cambay, and Janjira have any considerable trade, and industries are insignificant or non-existent. The decade did not include, for most of the States at any rate, the succession of good years that was reported in 1903 to be required in order fully to obliterate the effects of the recent famine; but improvement was reported from time to time in different quarters, and when the conditions were unfavourable the free employment of measures of relief on the British model generally made it possible to prevent a relapse and to keep the people from losing hope. It was reported in 1906, after a year that was unfavourable everywhere except in Khairpur, that it was "a "tribute to the efficiency and generosity of the administration that the people are not "in a much worse state than they are," and that "signs of desperation, such as "extensive and purposeless emigration or wide increase of violent crime, were not "reported from any single State." The Native States suffered severely from the shortage of rain in Bombay in 1911–12, but liberal and energetic measures of relief were taken in all cases. Wages, except in the most seriously affected districts, remained reasonably high, and prices were nowhere exorbitant.

	Area.	Population.		Annual Revenue (approximate)
		1901.	1911.	
Group I.—North Gujarat :—	Square miles.			£
Cutch	7,616	488,022	513,429	167,000
Kathiawar Agency :				
Junagarh	3,284	395,428	434,222	190,000
Navanagar	3,791	336,779	349,400	151,000
Bhavnagar	2,860	412,664	441,367	287,000
Porbandar	636	82,640	91,440	56,000
Dhrangadhra	1,156	70,880	79,142	40,000
Morvi	822	87,496	90,230	78,000
Gondal	1,024	162,859	161,916	94,000
Other States (including Jafarabad)	7,338	780,450	848,340	437,000
Palanpur Agency :				
Palanpur	1,766	222,627	226,250	35,000
Radhanpur	1,150	61,548	65,567	30,000
Other States	3,477	183,096	223,275	32,000
Mahi Kantha Agency :				
Idar	1,668	168,557	202,811	44,000
Other States	1,456	192,988	209,820	48,000
Rewa Kantha Agency :				
Rajpipla	1,517	117,175	161,588	67,000
Chhota Udepur	873	64,621	103,639	21,000
Bariya	813	81,579	115,350	28,000
Lunavada	388	63,967	75,998	14,000
Balasinor	189	32,618	40,563	9,000
Sunth	394	39,956	59,350	10,000
Other States	782	79,149	108,611	54,000
Cambay	350	75,225	72,656	40,000
Group II.—South Gujarat :—				
Dharampur	704	100,430	114,995	36,000
Bansda	215	40,382	44,594	31,000
Sachin	42	20,530	18,903	17,000
The Dangs (14 petty chiefs)	996	18,544	29,345	2,000

(Internal States.)

	Area.	Population.		Annual Revenue (approximate).
		1901.	1911.	
Group III.—North Konkan :—	Square miles.			£
Jawhar	310	47,538	53,489	13,000
Surgana	360	11,532	15,180	2,000
Group IV.—South Konkan :—				
Janjira	324	85,414	88,747	33,000
Savantvadi	926	217,732	217,240	31,000
Group V.—The Deccan (Satara Jaghirs) :—				
Bhor	925	137,268	144,601	32,000
Akalkot	498	82,047	89,082	29,000
Aundh	501	63,921	68,995	20,000
Phaltan	397	45,739	55,996	15,000
Jath (including Daphlapur)	980	68,665	78,643	17,000
Khandesh Agency (Mewas Estates)	963	14,639	23,624	9,000
Group VI.—Southern Maratha Country States :—				
Kolhapur	3,217	910,011	833,441	382,000
Sangli	1,111	226,128	227,280	72,000
Jamkhandi	524	105,357	100,304	63,000
Other States	1,471	313,045	308,464	101,000
Group VII.—Sind :—				
Khairpur	6,050	199,313	223,788	100,000
Total	63,864	6,908,559	7,411,675	2,900,000

The Bombay States have felt the effects of plague, which up to the end of 1911 was responsible for 414,000 deaths; but the total population increased by over 7 per cent. between 1901 and 1911, whereas between 1891 and 1901 it decreased by over 14 per cent.

North Gujarat.—Cutch.—Cutch has the largest area among the Bombay States, and comes second to Kolhapur in regard to population. The State is practically an island, and is for the most part treeless and barren. The agricultural conditions during the decade were in most years not more than fair, and in 1904-05 and 1905-06 scarcity was prevalent; relief measures were undertaken, and the people were helped to develope the wells that form the most important means of irrigation in this region. The first step in railway construction was taken, the Cutch State Railway from Bhuj to Tuna being opened at the end of 1908. The total length of this line is nearly 37 miles; the Anjar-Tuna section was opened in 1905. There is no connection with the railway systems of the mainland. The statistics of education show no marked advance; in 1911–12 there were some 7,800 pupils in State schools and 6,900 in private schools.

The year 1911–12 was practically rainless, and there was much distress, but no deaths from starvation or epidemic disease were reported from any of the relief works.

Kathiawar Agency.—Kathiawar, as was remarked above, includes nearly 200 States, great and small, whose chiefs divide among them the greater portion of the peninsula. The more important of these are shown in the table already given. Most of the ruling families are Rajputs. Kathiawar has the essential features of a prosperous agricultural country, but the population is thin, and the style of farming is reported to be slovenly. At the beginning of the period under review, Kathiawar was still suffering from the effects of the famine of 1899-1900; many of the States and Talukas were heavily, and some almost hopelessly, indebted. A large proportion of the smaller States remained in financial difficulties throughout the decade. As regards the cultivators, it was reported towards the end of the period that they were steadily recovering from the effects of the famine, and of a succession of indifferent years, though some of them were still in debt. In 1911 the rains failed badly, and it was only in a few places that monsoon crops were sown, and in fewer still that they reached maturity. The people, however, showed an unexpected power of endurance. Relief measures were necessary in a few places, but on the whole there was little distress. An

advance under the head of education is reported; in 1902-03 there were in the Agency altogether 1,207 educational institutions, with 84,245 pupils; by 1911-12 the numbers had increased to 1,482 and 104,433 respectively, the latter figure including 21,325 girls. The trade figures, though subject to great fluctuations, also showed a decided upward tendency.

Among the States that were under British administration, as a result of minorities, during the decade were Junagarh (from January 1911), Navanagar (from 1895 to 1903), Porbandar (from 1908 onwards), and Rajkot (from 1890 to 1907). Jam Shri Jasaji of Navanagar died in August 1906, and was succeeded by H.H. Jam Shri Ranjitsinhji Vibhaji, who was installed in March 1907.

Palanpur Agency.—The only States of importance in this Agency are Palanpur and Radhanpur, both of which are subject to Muhammadan rulers. Radhanpur was under British administration from 1895 to 1907, the chief being a minor. The Nawab met with a serious accident shortly after his installation, and died in February 1910. He was succeeded by his brother Kumar Shri Jalaluddin Khan. Agricultural conditions were not favourable during the decade, but the condition of the people was reported to have improved. Cattle-thefts caused some disturbances on the Palanpur-Sirohi border in the earlier years. Schools increased from 68 to 91 and the average daily attendance from 2,703 to 3,500. The monsoon crops in 1911 were a total failure, and nearly 50,000 people emigrated to Sind and other places in search of work.

Mahi Kantha Agency.—This Agency includes Idar and 62 smaller States. The Maharaja of Idar, Major-General Sir Partab Singh, G.C.S.I., K.C.B., A.D.C., abdicated the Idar *gadi* in favour of his adopted son Kumar Daolat Singh in June 1911, on his appointment as Regent of the Jodhpur State.

The States suffered very heavily in the famine of 1899–1900, but in most of the subsequent years good or fair crops were recorded, and conditions have improved. Education showed no marked advance; the figures, however, are higher than in the Palanpur Agency. In 1911–12 there were 133 schools with 7,454 pupils. The rainfall in 1911 was scanty, and there was a scarcity of fodder in most parts.

Rewa Kantha Agency.—Rewa Kantha includes altogether 61 States. The chiefs of Chhota Udepur, Balasinor, and Sunth being minors at the beginning of the decade, these States were under Agency management, and this arrangement continued in the case of Balasinor throughout the decade. There is little to record as to the internal affairs of the States. Fair crops were obtained in most seasons; in 1907–08, which was an exception, suitable measures were taken, by remission and suspension of revenue and the grant of advances, to alleviate distress. The number of schools showed a small increase, from 171 to 192, while the number of pupils rose from 8,080 to 10,590. The rainfall of 1911 was very scanty and unseasonable. The harvest was fair in Rajpipla and Chhota Udepur, but poor elsewhere. Practically no *rabi* crops were sown.

Cambay.—The small State of Cambay includes the town of the same name, which was in earlier days a leading port and centre of trade. During the period under review the number of schools increased from 25, with an average attendance of 1,166, to 43, with an attendance of 2,112. The administration was favourably reported on throughout the decade. The rainfall was deficient in 1911–12, and the crops were poor.

South Gujarat.—The South Gujarat group consists of the three second-class States of Dharampur, Bansda, and Sachin, and the tract known as the Dangs—a hilly forest country, divided nominally between 14 Bhil chiefs, the total area of which is about 1,000 square miles. The affairs of the first three States during the decade call for little comment. Sachin was under administration up to 1907. Efforts have been made in Dharampur and Bansda to place agriculture on a firmer basis and to ameliorate the condition of the backward classes.

The Dangs.—There are some interesting indications of progress in the Dangs, which are gradually being opened out and settled by Government. Formerly the chiefs harassed their subjects considerably, but law and order have been firmly established since 1903. Cart-roads have been constructed, and a number of officials have been established at Ahwa, which has been selected as the headquarters of the district. The inhabitants are reported to be polite, lazy, and addicted to the use of liquor. Until recently none could read or write, and they changed their villages very

(Internal States.)

frequently. Efforts have been made to fix the village sites by planting mango and tamarind trees, and the people are gradually being induced to settle down; it is reported also that they are rapidly learning more civilised ways of cultivation, and have taken readily to work on roads and buildings. The opening of a school by the American Mission in 1904 marked the beginning of educational development, and by 1910–11 there were five missionary schools. Crime is now rare; a riot at Ahwa in 1907 led to an increase in the strength of the police force, from 9 to 21, and a lock-up for prisoners has since been built.

North Konkan.—Under this head come Jawhar and the petty State of Surgana. In the former State there has been considerable educational development under the new Raja, who succeeded in 1905. The number of schools, which had fallen from six to two in the earlier years of the decade, had by 1912 been increased to 17, with 537 pupils. A free library also was opened at Jawhar in 1906. Surgana has one free State school, with an attendance varying between 20 and 40.

South Konkan—The States in this group are Janjira and Savantvadi. Jafarabad in Kathiawar is a dependency of Janjira. No events of importance were recorded during the decade. The administration of Janjira was favourably reported on. Savantvadi has for different reasons been under British administration since 1838. The chief was put in charge of certain departments in 1909.

The Deccan.—Satara Jagirs.—The Satara *jagirs*, so called because they were in former days feudatory to the Raja of Satara, became tributaries of the British Government on the lapse of that State in 1849. In most of the years of the decade the seasons were unfavourable in one or more of these scattered States. In 1905–06 famine conditions prevailed in all except Bhor. Adequate relief was given. There was a marked increase in the number of schools and scholars towards the end of the decade. The respective figures were 151 and 5,765 in 1902–03 and 260 and 10,549 in 1911–12. Akalkot was under an Administrator appointed by Government, owing to the minority of the chief, throughout the period, and Jath up to 1907. Aundh came under Government management for a different reason. The jurisdictional powers of the chief were resumed temporarily by Government in 1906, pending the result of an inquiry into a murder, and subsequently the chief was deposed. A new chief was installed in November 1909. The year 1911–12 was marked by lack of rain and poor crops.

The *Mewas Estates*, in West Khandesh, are six small chieftainships in hilly country, with a population consisting mostly of Bhils and Pawras.

Kolhapur.—Kolhapur stands easily first among the States under the Government of Bombay in respect of population and revenue. The present Maharaja, H.H. Sir Shahu Chhatrapati, G.C.S.I., G.C.I.E., G.C.V.O., succeeded in 1884, and under his guidance the administration of the State has been maintained at a high level. From the point of view of agriculture, several of the years under review were more or less unfavourable, and some measures of relief were necessary in 1905–06. The State suffered severely in the earlier years of the decade from plague, which in 1907–08 was responsible for nearly 25,000 deaths. Education showed a marked advance. In 1902–03 there were 244 schools with 8,726 scholars; in 1911–12 the numbers were 355 and 16,293. The rainfall of 1911–12 was inadequate, and the harvest only fair. The keen demand for ground-nut, the cultivation of which increased, helped the ryots to pay off State dues easily. Prices were high and wages rose.

Southern Maratha Country States.—Sangli, the most important of these States, was under direct Government management up to June 1910, when the young chief was invested with full powers. During the decade primary education was made free in Sangli, Jamkhandi, and some of the smaller States. The total numbers of schools and scholars increased from 250 and 10,962 respectively in 1902–03 to 400 and 19,182 in 1911–12. Lack of rain caused poor crops in 1911–12, and great difficulty was found in maintaining agricultural stock.

Khairpur.—Khairpur is the only Native State in Sind. Three-quarters of its whole area consists of arid and sterile country, where cultivation is impossible, but the part bordering directly on the Indus is rich and fertile. The Mir of Khairpur, H.H. Sir Faiz Muhammad Khan Talpur, G.C.I.E., under whose rule the State had made marked progress, died in March 1909, and was succeeded by his son, Imam Baksh Khan Talpur. The rapid extension of irrigation, on which much has been spent in recent

years, was reported to be bringing about a material improvement in the condition of all classes. The figures for education, which showed a remarkable advance in the previous decade, fell somewhat during the period under review; as against 156 schools with 5,282 pupils, in 1902–03, there were in 1911–12 only 114, with 4,385 pupils. Survey operations have been introduced recently, but the land revenue is still levied almost entirely by the primitive method of division of produce.

Bengal, Bihar and Orissa, and Assam States.—The distribution of the Native States in this part of India among the local Governments was altered in 1905 and 1912 as a result of the territorial rearrangements. The table below shows the States in their relations to the Governments of Bengal and Eastern Bengal and Assam, under which they were for the greater part of the period under review. The Chota Nagpur and Orissa States are now under the Government of Bihar and Orissa, while Manipur and the Khasi and Jaintia Hills are attached to Assam.

	Area.	Population.		Annual Revenue (approximate).
		1901.	1911.	
Bengal:—	Square miles.			£
Cooch Behar	1,307	566,974	592,952	164,000
Chota Nagpur Political States:				
Kharsawan	153	36,540	148,646	3,000
Seraikela	449	104,539		7,000
Orissa Feudatory States:				
Karond (Kalahandi)*	3,745	350,529	3,796,563	18,000
Mohurbhanj	4,243	610,383		85,000
Keonjhar	3,096	285,758		30,000
Dhenkanal	1,463	273,662		17,000
Gangpur	2,492	238,896		19,000
Patna*	2,399	277,748		19,000
Sonpur*	906	169,877		11,000
Bamra*	1,988	123,378		12,000
16 other States	7,714	843,164		91,000
Total	29,955	3,881,448	4,538,161	476,000
Eastern Bengal and Assam:—				
Hill Tippera	4,086	173,325	229,613	112,000
Manipur	8,000 (approximate)	284,465	346,222	30,000
Khasi and Jaintia Hills (15 Siemships)	3,900 (approximate)	99,294	112,958	4,000
Total	15,986	557,084	688,793	146,000

* Transferred from the Central Provinces to Bengal in 1905; at the same time Surguja and four others of the Chota Nagpur Tributary Mahals were transferred from Bengal to the Central Provinces.

Cooch Behar.—Cooch Behar is a low-lying plain, intersected by several large rivers. The population is almost entirely agricultural. The country is liable to suffer from an excess, rather than a deficiency, of water, and famine is unknown.

H.H. Sir Nripendra Narayan Bhup Bahadur, G.C.I.E., who became Maharaja of Cooch Behar as an infant in 1863, died in September 1911, and was succeeded by his son Maharajkumar Raj Rajendra Narayan. The State is managed by the Maharaja, with the assistance of a Council; the Superintendent of the State, a member of the Indian Civil Service lent by Government, is Vice-President of the Council and executive head of a number of departments. In 1909 a special Legislative Council was created by adding to the State Council five members nominated to represent different interests.

The rule of the late Maharaja was enlightened and progressive. During the period under review the condition of the people was generally prosperous, though cholera and fevers were both very prevalent in some years. An extensive campaign against cholera was inaugurated in 1909, and the number of reported cases fell greatly

(Internal States.)

in subsequent years. The experimental cultivation of tobacco, with a view to establishing a tobacco industry, was carried on with some success. Education has been maintained at a high level, and some improvements have been made. It was reported at the beginning of the decade that more than a quarter of the boys of school-going age were attending schools. Female education makes slow progress, and only 385 girls altogether were under instruction in 1911–1912.

Chota Nagpur Political States.—Kharsawan was under Government management throughout the decade. The administration of Seraikela was reported to be generally satisfactory. In both States attempts at resettlement made by the chiefs had given rise to serious discontent; the work of resettlement was therefore taken up by Government, and completed in 1908 in both cases. Education made some advance.

Orissa Feudatory States.—The States included under this head (also known as the Orissa Tributary Mahals) were increased in 1905 by the addition of five States from the Central Provinces and two from the Chota Nagpur States. They occupy a succession of ranges rolling back towards the centre of the peninsula, intersected by the valleys of the Mahanadi, Brahmani, and Baitarani rivers. The hills are densely wooded, while the valleys yield rich crops. Except Moharbhanj, which under its late enlightened ruler (who died in February 1912) was governed on British lines, the States are administered by the chiefs in more or less primitive fashion. A number of the States were under Government management for some part of the period under review. The people are on the whole peaceable and law-abiding, but some of the aboriginal tribes have given trouble from time to time. During the decade considerable progress was made in various directions. The chiefs gave attention to the encouragement of industries, agriculture, and education, and there was a steady increase in the expenditure on public works. It was reported in 1911 that a very marked improvement was noticeable all round in means of communication and in the public buildings. The condition of the people was generally satisfactory.

Hill Tippera.—The circumstances of the Raja of Hill Tippera are peculiar in that the most valuable portion of his possessions is an estate in British territory, as regards which his position is that of a zamindar. The State itself is thinly populated, and the native population is almost entirely agricultural. The administration is modelled on that of a British province, and most of the higher officials are Bengalis. The present Raja, H.H. Bisendra Kishore Deb Barman Manikya, succeeded his father in 1909. The condition of the people was reported to be generally satisfactory during the period under review, and the State revenues showed a considerable increase. Special efforts were made to extend primary education, and the total number of schools increased from 73, with 2,419 scholars, to 148 with 5,287 scholars. Of the latter, however, all but 1,414 were Bengalis. An attempt to develope sericulture was in progress at the State Model Farm during the decade. The crops suffered from a plague of rats in 1911-12, and there was considerable distress among the hillmen.

Manipur.—Manipur was administered by the Political Agent, the chief being a minor, from 1891 to 1907. In the latter year the administration was made over to H.H. Raja Chura Chand Singh. Two important changes made during the period of minority were the abolition of *lalup*, a system of enforced labour, and the substitution of a regular cash assessment throughout the valley for the old system of revenue payment in kind. The Raja is assisted by a Darbar, the Vice-President of which is a member of the Indian Civil Service lent to the State. A notable feature of the period under review was the great progress made by education; in 1902–03 there were only 18 schools, with an average attendance of 897; by the end of the decade the numbers had risen to 78 and 3,659 respectively. Some trouble was from time to time given by the hill tribes and by the inhabitants of the unadministered tracts to the east of the State. Rats, attracted by the seeding of the wild bamboo, seriously damaged the rice crops in some parts in 1911–12. Relief measures were adopted.

Khasi and Jaintia Hills.—The affairs of these petty States call for no special comment. The people are reported to have made progress towards civilisation.

United Provinces States.—The number of States in political relations with the Government of the United Provinces was increased from two to three by the constitu-

tion in April 1911 of the State of Benares. Particulars of the three States are shown in the table below.

	Area.	Population.		Annual Revenue (approximate).
		1901.	1911.	
	Square miles.			£
Rampur - - - - - - - - -	899	533,212	531,217	240,000
Benares - - - - - - - - -	865	351,841	346,936	112,000
Tehri (Garhwal) - - - - - -	4,180	268,885	300,819	44,000

Rampur.—Rampur, the sole surviving representative of what were once termed the Rohilla States, occupies a level, fertile tract of country in Rohilkhand. Up to February 1907 the Nawab, H.H. Sir Muhammad Hamid Ali Khan, G.C.I.E., G.C.V.O., was assisted by a Minister appointed by the Government; since then the administration has been under His Highness' direct control. The greater part of the State is secured from drought by a system of canals; both canal and well irrigation continued to receive attention during the period under review, and, thanks to their advantages under this head, the population suffered no acute distress during the famine year 1907–08. An attempt to revive the sugar industry has been attended by some success. The State was expected to benefit considerably by the opening in 1907 of the Lalkua-Kashipur railway, which runs along its northern border. In 1909 a distillery system took the place of the system of out-stills. Rampur has hitherto been backward as regards literacy, but education has received great attention in recent years. The number of pupils increased from 4,514 in 1902–03 to 5,351 in 1910–11. The few girls' schools maintained up to 1909 were, however, abolished in that year. It was reported that long experience had shown them to be quite useless, and that notwithstanding every effort to induce them to do so, respectable people did not send their daughters to the schools. An offer of a regiment of Imperial Service Infantry was accepted in 1910.

Benares.—The constitution of the State of Benares, from territories including parts of the Family Domains of the Rajas of Benares, took effect from the 1st April 1911, on which date H.H. Maharaja Sir Prabhu Narayan Singh, G.C.I.E., was established as a ruling chief with full powers, subject to the suzerainty of His Majesty, and to certain conditions safeguarding to the residents in the territories in question the rights and privileges they had enjoyed under British administration. The capital of the State is Ramnagar, situated on the Ganges almost opposite Benares. The first administration report, covering the first six months of the Maharaja's rule, relates largely to preliminary measures of organisation. A constitution for the good government of the State was prepared under the guidance of the Political Agent, and approved by Government. It was reported that practically all important Acts of the Government of India were made applicable to the State with certain trifling alterations. Administrative divisions were established, and numerous departments were set up, some of them under officers borrowed from the Government of India. A Council consisting of the heads of departments was formed. In the part of the Family Domains not included in the State the Maharaja ceased to hold a special position, and assumed the status and responsibilities of a landholder under the ordinary law. The Maharaja inaugurated his rule by the remission of certain cesses and large remissions of debts due to the State. Occupancy rights have been freely granted, and have been declared to be both heritable and transferable so long as the transferee is a member of the agricultural classes and a subject of the State. Irrigation schemes are under consideration, and the State is endeavouring by means of agricultural banks to assist agriculturists to free themselves of debt. The number of schools and scholars rose from 43 and 2,773 in 1910–11 to 57 and 4,265 in 1911–12.

Tehri (or Tehri-Garhwal) lies entirely in the Himalayas. Cultivation is practically confined to terraces on hill sides, or small alluvial areas in river beds. The State contains very valuable forests, from which a large proportion of the revenue is derived. The administration continued to be satisfactory during the period under review. Famine conditions in 1907–8 were met by extensive measures of relief.

(Internal States.)

Punjab States.—Of the Punjab States, Bahawalpur, which is by far the largest, lies in the south-west and includes a great area of pure desert; Chamba, Mandi, Suket, Sirmur, and the Simla Hill States are in the Himalayan regions; the remaining States are in the centre and south-east of the province. The three Phulkian States are much divided and intermingled. There is a Political Agent for the Phulkian States and Bahawalpur and a Superintendent of the Simla Hill States. The other States are under the political control of the Commissioners of the Delhi, Jullundur, and Lahore Divisions. The more important States are shown in the table below. The Punjab States, in common with the surrounding British territory, have suffered heavily from plague. The total number of deaths up to the end of 1911 was 311,000, and the total population in 1911 was less by nearly 5 per cent. than in 1901.

	Area.	Population.		Annual Revenue (approximate).
		1901.	1911.	
Phulkian States:—	Square miles.			£
Patiala	5,412	1,596,692	1,407,659	488,000
Jind	1,259	282,003	271,728	87,000
Nabha	928	297,949	248,887	103,000
Bahawalpur	15,000 (approximate).	720,877	780,641	182,000
States under the political control of the Commissioner of Delhi:—				
Sirmur (Nahan)	1,198	135,687	138,520	57,000
Four other States	542	128,517	119,534	33,000
Under the Commissioner, Jullundur:—				
Kapurthala	630	314,351	268,133	167,000
Mandi	1,200	174,045	181,110	39,000
Faridkot	642	124,912	130,294	74,000
Maler Kotla	167	77,506	71,144	37,000
Suket	420	54,676	54,928	13,000
Under the Commissioner, Lahore:—				
Chamba	3,216	127,834	135,873	34,000
Simla Hill States:—				
Bilaspur	448	90,873	93,107	13,000
Bashahr	3,881	84,636	93,203	7,000
Nalagarh	256	52,551	49,230	9,000
16 other States	1,352	161,289	168,803	37,000
Total	36,551	4,424,398	4,212,794	1,380,000

The Phulkian States.—Patiala, which ranks first among the Punjab States, was administered by a Council of Regency up to September 1909, owing to the minority of the Maharaja, H.H. Sir Bhupindra Singh, G.C.I.E., who meanwhile spent some years at the Aitchison College. Early in the decade the finances of the State were restored to a sound footing, and, among other reforms, the Police Department was reorganised. A steady improvement in the general administration was reported. The settlement operations, commenced in 1901 by a British officer lent for the purpose, were completed in 1909. The *panchayat* system, introduced during the same period, was reported to be working with remarkable success.

The Maharaja of Nabha, H.H. Sir Hira Singh, G.C.S.I., G.C.I.E., who had ruled since 1871, and had continued to show himself an energetic and able ruler, died in December 1911. He was succeeded by his only son, Tikka Ripudaman Singh. The Maharaja of Jind, H.H. Sir Ranbir Singh, K.C.S.I., was reported as devoting much attention to the work of administration.

Bahawalpur.—Bahawalpur was administered by a Superintendent from 1899 to 1903, and the death of the young Nawab while returning from Mecca in 1907 made a long period of minority rule inevitable, the succession passing to a child of less than three years old. The State has been managed since by a Council of Regency. The finances are in a good condition, and it is reported that the Council intend to invest savings during the chief's minority in productive works, and especially in improving and extending the inundation canals on which cultivation mainly depends. The completion in 1911–12 of the Sharkia Sadikia Inundation Canal made a large area of desert available for cultivation, and colonisation operations have been taken in hand.

Other States.—In Sirmur the late chief continued to conduct the administration with efficiency; he was succeeded, on his death in July 1911, by his son, Tikka Amar Singh. In Kapurthala the Administrative Council appointed in 1901 was retained, and conducted the business of the State during the frequent absences of the Maharaja. The decade in Mandi was a rather troubled one. Raja Bije Sen, whose succession dated back to 1851, died in 1902, and was succeeded, in the absence of legitimate male issue, by his illegitimate son, Kanwar Bhawani Singh. The State suffered great damage and a loss of life estimated at 1,500 in the earthquake of April 1905. Relief was given on a liberal scale. In May 1909 intrigues within the State culminated in a serious disturbance, which necessitated the despatch of troops from Simla. Order was restored, and in 1911 an officer of the Indian Civil Service was at the request of the Raja lent to the Darbar as Settlement Officer, with a view to the more even distribution of the land revenue and a satisfactory solution of the question of *begar*. The Raja of Mandi died in February 1912, and the State was placed in charge of the Settlement Officer pending the selection of a successor to the *gaddi*. Faridkot has been under administration by a Council since the accession of a minor chief in 1906. A revised revenue settlement is being undertaken. The condition of Suket was reported to be unsatisfactory, and the people to some extent disaffected, in the middle of the decade, but many very necessary reforms were taken in hand by the present chief, H.H. Raja Bhim Sen, on his succession in 1908. Among other schemes, one for bringing under cultivation large areas of arid and waste land was noted.

Progress in various directions has been reported from Chamba since the succession of Raja Sir Bhure Singh, K.C.S.I. The former Raja, His Highness' brother, abdicated in 1904. A great deal has been done to improve communications within the State.

Simla Hill States.—It is unnecessary to refer at length to these small States, the condition of most of which was satisfactory during the period under review. It became necessary in 1903, in consequence of the contumacious behaviour of the Raja of Bilaspur, to deprive him temporarily of his powers as a ruling chief, and he resided for some years at Benares. Meanwhile the State made good progress under a manager. In 1908 the Raja returned to his State, accepting certain conditions imposed by Government. Bashahr was disturbed in 1905–06 by a local rebellion, which necessitated the despatch of a force of police. Unrest was reported again in 1911, but the latest report is that the administration is proceeding smoothly, and that there are no traces of the late disaffection.

Central Provinces States.—The transfers of States from the political control of the Government of Bengal to that of the Government of the Central Provinces, and *vice versâ*, that were effected in 1905 have been noted above (*see* Bengal). The States under the Central Provinces Government from 1905 to 1912 are shown in the table. The chiefs are largely Rajputs, or *soi-disant* Rajputs; there is a strong aboriginal element in the population, and at the last census 745,434 persons were returned as Animists. The period under review was one of progress and, generally speaking, of considerable prosperity. The people steadily recovered from the effects of the famines of 1897 and 1900, and the finances of the States were restored to a satisfactory condition.

	Area.	Population.		Annual Revenue (approximate).
		1901.	1911.	
	Sq. miles.			£
Bastar - -	13,062	306,501	433,310	24,000
Jashpur* - -	1,963	132,114	174,458	7,000
Kanker - -	1,429	103,536	127,014	13,000
Khairagarh - -	931	137,554	155,471	21,000
Nandgaon - -	871	126,365	167,362	26,000
Raigarh - -	1,486	174,929	218,860	12,000
Surguja* - -	6,055	351,011	428,703	12,000
Eight other States	5,377	299,130	411,824	39,000
Total - -	31,174	1,631,140	2,117,002	154,000

* Transferred from Bengal in 1905.

The monsoon failed in 1907, but no measures of famine relief were necessary. The total population increased by over 29 per cent. between 1901 and 1911; in the preceding 10 years there had been a decline of nearly 5 per cent. Education is reported to have made a great advance. A number of the States were under the direct administration of Government for some part or other of the decade. The Raja of Bastar, who succeeded in 1891 as a child of six, was installed in 1908. Bastar was disturbed,

(Internal States.)

and the State finances temporarily crippled, by a rising of some of the aboriginal tribes early in 1910. The rebellion was promptly suppressed, and the chief offenders were punished; two European officers have since been appointed Diwan and Assistant Diwan, and the State is reported to have returned to a condition of complete tranquillity. In Surguja, where the population is mainly aboriginal, the wild Korwa tribe are a standing cause of trouble. A band of them committed several murders and robberies in 1910. The chief has set himself to the task of reclaiming and settling them.

The year 1911 was a peaceful and prosperous one, and a satisfactory feature was the ease with which the land revenue demand was realised in most States. There was a considerable fall in reported crime in most States.

CHAPTER IV.

ADMINISTRATION.

The main outlines, and many of the details, of the system under which British India is governed are laid down in a long series of Acts of Parliament beginning with Lord North's Regulating Act of 1773. Among them the Government of India Act of 1858, which brought the territories of the East India Company under the direct government of the Crown, and made provision accordingly for the exercise of the supreme control over the administration of India, stands on a level of importance of its own. With the passing of this Act, and of some others within the next few years, of which the Indian Councils Act of 1861 was from the present point of view the most important, the constitutional and administrative framework, as it now exists, was practically completed. Since then parliamentary legislation for India has built on the lines then laid down, and has dealt largely with matters of detail. At the same time many of the changes made in the course of this process of development have been of great importance, and some of the most important come within the period covered by this Statement.

The Secretary of State.—India is, in the words of the Act of 1858, "governed by and in the name of" the King-Emperor. The authority of the Crown over India is exercised in England through the Secretary of State, who inherits, subject to the rights of the Council of India, and to the powers reserved to itself by Parliament, all the powers and duties, relating to the government or revenues of India, of the Board of Control and of the East India Company, and who, as a member of the Cabinet, is responsible to, and represents the authority of, Parliament. In certain matters, including the expenditure of Indian revenues and the raising of loans in Great Britain, the Secretary of State cannot act without the concurrence of a majority of votes at a meeting of the Council. In all other matters, the determination of the Secretary of State is final. All orders proposed to be issued, or communications proposed to be sent to India, must, however, be submitted to a meeting of the Council, or placed in the Council Room for seven days for perusal, before they are issued or sent, unless they deal with secret matters or the action proposed is, in the opinion of the Secretary of State, urgently required. In the latter case the Secretary of State must record his reasons, and notice must be given to every member of the Council.

The Council of India.—The Council of India conducts under the direction of the Secretary of State the business transacted in the United Kingdom in relation to the government of India, and the correspondence with India. One meeting of the Council at least must be held in every week. The powers of the Council and its position in relation to the Secretary of State are defined by the Act of 1858; it is, as has already been indicated, in the main a consultative body, with a limited veto, and without the power of initiation. Its constitution has been altered from time to time, most recently by the Council of India Act, 1907 (7 Edw. 7. c. 35). The Council established in 1858 consisted of 15 members, at least 9 of whom, it was laid down, must have served or resided in India for 10 years at least, and must not have left India more than 10 years before appointment to the Council. The members held office during good behaviour, and the salary was £1,200 a year. An Act of 1869 (32 & 33 Vict. c. 97) fixed the term of office at 10 years, at the same time giving the Secretary of State power to re-appoint for a further period of 5 years for special reasons of public advantage. In 1889 the Secretary of State was given power (52 & 53 Vict. c. 65) to reduce the number of members, by refraining from filling vacancies, to 10. The Act of 1907, referred to above, fixed the number of members at not less than 10 and not more than 14, and reduced the maximum interval between the date of leaving India and the date of appointment to the Council of members with Indian experience from 10 years to 5 years, the normal term of office from 10 years to 7 years, and the salary from £1,200 to £1,000 a year. Vacancies in the Council are, and have been since 1869, filled by appointment by the Secretary of State.

The Council consists at the present time of 12 members, of whom 10 have served in various capacities in India. The other two members have special knowledge of finance. Since 1907 the Council has included two Indian members. From the Council are appointed seven committees, to which matters connected with

the various branches of the administration are referred before being finally laid before the Secretary of State in Council.

The India Office.—The establishment of the Secretary of State in Council at the India Office is similarly divided into six Correspondence departments (financial, military, political and secret, judicial and public, revenue and statistics, and public works), each under a Secretary; an Accounts department, under an Accountant-General; a Stores department, under a Director-General of Stores; and a Registry and Record department, under a Registrar and Superintendent of Records.

In the India Office is also accommodated the establishment of the Auditor of the accounts of the Secretary of State in Council, an officer appointed by warrant under the Royal Sign Manual, countersigned by the Chancellor of the Exchequer, who examines and audits the accounts of the receipt, expenditure, and disposal in this country of all monies, stores, and property applicable for the purposes of the Government of India Act, 1858.

The Viceroy and Governor-General.—The supreme authority in India is vested by a series of Acts of Parliament in the Governor-General in Council, subject to the control of the Secretary of State. At the head of the Government is the Governor-General, who also, as the representative of the King, bears the title of Viceroy. He is appointed by the Crown, and usually holds office for a term of five years. Under specified conditions and in specified circumstances, power is reserved to the Governor-General to act alone and independently of his Council. Thus he may, "in cases of emergency," make and promulgate "ordinances for the peace and good government" of British India, or any part thereof, which, subject to certain conditions, have the force of law for a period not exceeding six months. He has power also to overrule a majority of his Council in regard to measures "whereby the safety, tranquillity, or "interests of the British possessions in India, or any part thereof, are or may be, in "the judgment of the said Governor-General, essentially affected." These are powers only rarely exercised. He has also by law certain powers of control over legislation. Measures relating to the public revenue or debt, religion, military or naval matters, or foreign relations, may not be introduced in any of the legislative councils without his previous sanction, and all Acts require his assent. In the case of a measure passed by his own Council, he has, besides the power of withholding his assent, the third alternative of reserving the law for the signification of the Royal pleasure.

The Executive Council.—Apart from the few special provisions referred to above, the Governor-General has no power to act otherwise than in Council (where he is ordinarily bound by the decision of the majority), or by the implied authority of the Governor-General in Council. All official acts of the central Government run in the name of this corporate body, which is commonly and properly described (the usage being recognised by an Indian Act) as the Government of India. In the Governor-General in Council is vested "the superintendence, direction, and control of the whole civil and military government" of British India.

The Executive Council consists at present of six "ordinary" members, appointed by warrant under the Royal Sign Manual, and of the Commander-in-Chief in India, who is, under the statute, an "extraordinary" member appointed by the Secretary of State in Council at his discretion. The term of office is, by custom, five years. Of the ordinary members, three must have been at the time of appointment in the service of the Crown in India for at least 10 years, and one of the others must be a barrister or advocate of not less than five years' standing. At least five ordinary members must be appointed. The sixth, if six were appointed, had under the Act of 1874 which authorised the appointment to be a member "for public works purposes," but this restriction was removed in 1904 (4 Edw. 7, c. 26). Every order, as was indicated above, issues by the authority, express or implied, of the Council as a whole—the "Governor-General in Council." But to each member is allotted, as his special province, the charge of one or more of the departments among which the business of the Government of India is distributed. The special functions of the separate members have therefore changed with the changes made in these departments during the ten years under review. Throughout the period the Governor-General has himself taken charge of the Foreign Department, and the Legislative Department has been in the charge of a special member (who has since March 1909 been an Indian). In 1902 the four remaining ordinary members (there were then five only) had charge respectively of the Military, Public Works, Finance and Commerce, and Home and Revenue and Agriculture Departments. The Commander-in-Chief had no department under him. In 1905 a

number of changes were made. A sixth ordinary member was added, to take charge of the new department of Commerce and Industry, and at the same time the Public Works Department (having transferred a large part of its work to the new department and to the Railway Board) became a joint charge with the Revenue and Agriculture Department, while the Home Department became a separate charge. Later in the same year, the Military Department was replaced by the Army and Military Supply Departments. The former was placed under the Commander-in-Chief, who thus for the first time received the charge of a department; the latter was in charge of a separate member, who replaced the member in charge of the Military Department. In 1909 the Military Supply Department was abolished, and the responsibility for the whole military administration passed to the Commander-in-Chief as member in charge of the Army Department. Finally, in November 1910, a sixth ordinary member was again added to take charge of the newly-constituted Education Department. At present, therefore, the Foreign Department is under the Governor-General, the Army Department under the Commander-in-Chief, and the Finance, Home, Commerce and Industry, Education, and Legislative Departments have each a separate member, while the Public Works Department is a joint charge with the Department of Revenue and Agriculture.

The Council meets usually once a week, but special meetings may be called at any time. The public are not admitted to meetings. Members of Council have no power to act otherwise than in Council, or by the implied authority of the Governor-General in Council. In practice, under the rules for the disposal of business, a member passes orders, without bringing the matter before the Council, in minor cases. All important matters, and especially cases where two departments differ in opinion, or a local Government is overruled, are referred to the Governor-General, and orders are passed either by him or by the whole Council. Questions raising large issues of general policy are always settled in Council. If there is a difference of opinion the vote of the majority prevails, subject to the power of the Governor-General, referred to above, to overrule the Council in exceptional cases. If the votes are equally divided, the Governor-General, or in his absence the senior member present, has a casting vote.

For the purposes of legislation, the Governor-General's Council is greatly enlarged; the Legislative Council is dealt with, together with the provincial Legislative Councils, later on in this chapter.

The Secretariat.—The Secretariat of the Government of India is at present divided into nine departments, enumerated above, each under a Secretary. It is the duty of a department, when a question comes up for consideration, to prepare and submit to the member of Council in charge the papers on the subject. If a question is taken before the Council, the secretary of the department concerned attends during its discussion and records the orders passed. The nine departments between them cover the whole field of administration; to each is assigned a number of heads of business, and it should be noted that though the names by which the departments are known indicate generally the nature of their work, they are not to be taken as defining their scope exactly. Thus the Education Department, besides dealing with education, deals with other highly important subjects, including sanitation and municipalities. Most sources of revenue—opium, salt, stamps, excise, and assessed taxes—fall within the province of the Finance Department. The Revenue and Agriculture Department is concerned, as regards revenue, only with land revenue.

The Provincial Governments.—Each of the fifteen provinces into which British India is now divided has its own local Government. In constitution and status the local Governments differ widely. All of them alike are under the superintendence and control of the Governor-General in Council, but the degree to which the authority of the Governor-General in Council is in practice brought to bear is graduated in accordance with the differences in status between the provincial Governments.

The changes made during the period under review and since its close both increased the number of provinces and added to the variety of local Governments. In 1902 the provincial Governments could be simply classified under three heads: first, the Presidency governments of Madras and Bombay, administered by Governors with executive as well as legislative councils; second, the lieutenant-governorships of Bengal, the United Provinces, the Punjab, and Burma, with legislative but without executive councils; and, thirdly, the Chief Commissionerships, with neither executive

nor legislative councils. The redistribution of territory in 1905 did not affect this classification, except to the extent of adding Eastern Bengal and Assam to the list of lieutenant-governorships.

A new type of provincial government was brought into existence by the appointment in November 1910 of an executive council to assist the Lieutenant-Governor of Bengal. Its introduction was intimately connected with the changes made in the legislative councils in 1909. The Government of India, in their letter of the 1st October 1908 dealing with the proposed changes, wrote as follows: "In conclusion we have one more observation to make. We recognise that the effect of "our proposals will be to throw a greater burden on the heads of local Governments, "not only by reason of the actual increase of work caused by the longer sittings of "the legislative councils, but also because there will be considerable responsibility "in dealing with the recommendations of those councils. It may be that experience "will show the desirability of strengthening the hands of lieutenant-governors in the "larger provinces by the creation of executive councils. . . ." The Secretary of State, in reply, expressed himself as being much impressed by the considerations advanced, and stated that he proposed to ask for power to create executive councils from time to time as might be found expedient. The desired powers were given by section 3 of the Indian Councils Act, 1909, which authorised the Governor-General in Council, with the approval of the Secretary of State in Council, by proclamation to create an executive council in Bengal; and similarly to create an executive council in any other province under a lieutenant-governor, provided in this case that a draft of the proposed proclamation must be laid before Parliament, and that "if an address "is presented to His Majesty by either House against the draft or any part thereof, "no further proceedings shall be taken thereon."

Under the powers conferred by the Act of 1909, an executive council for Bengal was established on the 18th November 1910. The maximum number of members was fixed by the Act at four. The Governor-General's proclamation fixed the actual number, in the first instance, at three, and laid down that, as in Madras and Bombay, two at least of the members must be "persons who at the time of "their appointment have been in the service of the Crown in India for at least "12 years." It also conferred on the Lieutenant-Governor a power similar to that enjoyed by the Governor-General and the Governors of Madras and Bombay, of overruling his council "in any case which in the judgment of the Lieutenant-"Governor is of high importance and essentially affects the public interest and "welfare." Otherwise the opinion of the majority was to prevail, the Lieutenant-Governor having a casting vote. Appointments to a lieutenant-governor's executive council are made by the Governor-General, with the approval of His Majesty.

From the 1st April 1912 the Governor-General ceased to be, as he had hitherto been in theory, Governor of the Presidency of Fort William in Bengal, and the reconstituted province of Bengal became a Presidency Government under a separate Governor. The Government of India Act of 1912 placed the Governor and Council in Bengal on the same level, and made them subject generally to the same enactments, as the Governors and Councils in Madras and Bombay. The same Act made applicable to the new province of Bihar and Orissa the provisions of the Act of 1909 relating to the constitution of an executive council in Bengal. An executive council was accordingly established for Bihar and Orissa with effect from the 1st August 1912, with a constitution similar to that of the council established in Bengal in 1910. It consists at present of three members.

Another new type of local government was brought into existence in November 1912, when provision was made for the establishment of a legislative council in the Chief Commissionership of Assam, powers having been taken for this purpose also in the Government of India Act of 1912. The local Governments at the present time, therefore, fall into five classes, the first including Madras, Bombay, and Bengal, administered by Governors in Council; the second including only Bihar and Orissa, administered by a Lieutenant-Governor who, like the Governors, has an executive as well as a legislative council; the third consisting of the remaining lieutenant-governorships—of the United Provinces, the Punjab, and Burma—with legislative councils only; the fourth consisting of Assam, the only Chief Commissionership so far provided with a legislative council; and the fifth comprising the remaining Chief Commissionerships, of which the Central Provinces,* the North-West Frontier Province, British Baluchistan, and the new province of Delhi are the most important.

* A Legislative Council has been sanctioned, and will shortly be established, for the Central Provinces.

By custom appointments to local Governments are for a term of five years.

Madras, Bombay, and Bengal.—The two provinces of Madras and Bombay have always occupied a special position, as representing the old Presidencies of the same names, which were independent of, and on a footing of equality with, the third Presidency of Fort William (Bengal) until they were made subject to the control of the Governor-General and Council of that presidency, in certain matters, by the Regulating Act of 1773. The authority of the central government was extended by subsequent Acts, and since 1833 the Governor-General in Council has had the general power of control over "the whole civil and military government" of British India referred to above. The Governments of Madras and Bombay, nevertheless, still enjoy in practice a large degree of independence. The civil administration of each is conducted by a Governor in Council, whose powers and duties are regulated by Act of Parliament (the military control and authority formerly exercisable by the Governors in Council were transferred to the Governor-General in Council when the separate Madras and Bombay armies were abolished in 1893). The governors are appointed by the Crown, and are usually chosen from among persons of high rank and administrative experience in this country. They have a power similar to that of the Governor-General of overruling their councils in special cases.

The members of the executive councils are appointed by warrant under the Royal Sign Manual. Until 1909 the maximum number of members was three, and 12 years' previous service under the Crown in India was an essential qualification in every case. Each council in practice consisted of two members of the Indian Civil Service. To these the presidency commanders-in-chief had been added as extraordinary members so long as the separate presidency armies were retained. Under the Indian Councils Act, 1909, the number of members is now "such number, not exceeding four, as the "Secretary of State in Council may from time to time direct, of whom two at least shall "be persons who at the time of their appointment have been in the service of the Crown "in India for at least 12 years." Under this provision each council was enlarged in 1910 by the addition of an Indian member. The power to increase the total number of members to four has not so far been exercised.

The arrangements for the disposal of business are on the same lines as those adopted by the Government of India. The Governments of Madras and Bombay still retain a limited right (now extended to Bengal) of communicating direct with the Secretary of State, derived from the time when these provinces constituted independent presidencies.

The other provinces are either fragments of the old Bengal Presidency or areas that may be regarded as having been at some time under the direct administration of the Governor-General.

As has already been mentioned, the new province of Bengal has been placed on the same footing as Madras and Bombay.

The Lieutenant-Governorships.—The constitution of the Government of the new province of Bihar and Orissa has been described above. In the three remaining lieutenant-governorships—the United Provinces, the Punjab, and Burma—there is no executive council, and the lieutenant-governor stands alone at the head of the local administration. The lieutenant-governors are, as in the case of Bihar and Orissa, appointed by the Governor-General, subject to the approbation of the Crown. They are chosen from officers who have been at least 10 years in the service of the Crown in India (in practice from the Indian Civil Service). In the absence of executive councils, the lieutenant-governors have special assistance in regard to some of the most important branches of administration, in the shape of a Board of Revenue of two members in the United Provinces and Financial Commissioners in the Punjab and Burma.

The Chief Commissionerships.—The Chief Commissioners, by whom the remaining provinces are administered, stand on a lower footing than the lieutenant-governors. Their appointment is not specifically provided for by Act of Parliament. The territories under their charge are in theory "under the immediate authority and management" of the Governor-General in Council, who appoints Chief Commissioners at his discretion and delegates to them such powers as are necessary for the purposes of administration. So far, however, as the application of Indian enactments is concerned, Chief Commissioners are, by virtue of the definition contained in the General Clauses Act, 1897, placed on the footing of Local Governments, and in practice the powers of the Chief Commissioners of the Central Provinces and Assam are hardly inferior to those

of a lieutenant-governor. The North-West Frontier Province and British Baluchistan are charges of less magnitude, and the Chief Commissioners are at the same time Governor-General's Agents for dealing with tribes and territories outside British India. The four remaining "provinces" are small charges, not comparable in area with the rest, though the new province of Delhi has a special importance of its own. The Agent to the Governor-General in Rajputana and the Resident in Mysore are *ex-officio* the Chief Commissioners of Ajmer-Merwara and Coorg respectively, while the Superintendent of the Penal Settlement of Port Blair, from which the islands derive their administrative importance, is Chief Commissioner of the Andaman and Nicobar Islands.

Relation of the Government of India to Provincial Governments.—The Governor-General in Council is responsible for the entire administration of British India and for the control exercised in varying degrees over the native states. In practice, the Government of India retains in its own hands matters relating to foreign relations, the defences of the country, general taxation, currency, debt, and tariffs, ports, telegraphs, and railways. Ordinary internal administration, the assessment and collection of the revenues, education, medical and sanitary arrangements, and irrigation, buildings and roads fall to the share of the provincial Governments. But in all these matters the Government of India exercises a general and constant control, and lays down lines of general policy. Questions of policy or of special importance are submitted by the provincial Governments for the orders of the Governor-General in Council, to whom also are submitted copies of the printed proceedings of the local Governments, and of the administration reports of their main departments. The financial powers of the local Governments, in particular, are limited by definite and strict rules. The Government of India employs, besides the controlling officers for departments which it directly administers, inspecting or advisory officers for some of the departments which are primarily left to the local Governments, such as the Inspector-General of Forests, and the Director-General of Archæology. There is, moreover, a wide field of appeal to the Government of India from officials or private persons who may consider themselves aggrieved by the action of a local Government.

The supervision over most of the important native states rests directly with the Governor-General in Council. In some cases, however, historical associations have left relations with important states under the local Governerments, which also deal with minor states enclosed in, or contiguous to, their respective provinces.

Provincial Secretariats.—Each province has a secretariat, of a strength proportionate to its administrative requirements. The arrangements for the disposal of business are on the same general lines as in the Government of India Secretariat, but the departments and secretaries vary in number and in name.

The Legislative Councils.—The Indian Councils Act, 1909, and the regulations issued under it, made very extensive changes in the constitution and functions of the Indian legislative councils, and gave them a new position, and a new importance, in the Indian scheme of government. It is impossible here, and it does not come within the province of this Statement, to enter in detail into the questions of policy that lay behind the changes then made, or even to give a complete account of the changes themselves. Very full papers have been laid before Parliament.* It is proposed only to give a brief summary with so much information as to the earlier history of the legislative councils as will make clear the extent and nature of the advances made in recent years.

Up to 1833 such legislative powers as were exercisable in India were vested in the executive Governments. This was the period of the Bengal, Madras, and Bombay "Regulations." The germ from which all the special legislative councils may be said to trace their descent is to be found in the Charter Act of 1833, under which Thomas Babington Macaulay was appointed in the following year to be the first legislative councillor on the Governor-General's Council. Under this Act all legislative power in India was vested in the Governor-General in Council; the council was increased by the addition of a fourth ordinary member, who was not to be one of the Company's servants, and had no power to sit or vote except at meetings for the purpose of making laws and regulations; and it was laid down that laws made by this body were, subject to their not being disallowed by the Court of Directors, to have effect as Acts of Parliament. Henceforward the laws passed by the Indian legislature were known as "Acts."

* Cd. 3710 of 1907; Cd. 4426, 4435, and 4436 of 1908; Cd. 4652 of 1909; and Cd. 4987 of 1910.

Further changes were made by the Charter Act of 1853. The council was doubled in size, for legislative purposes, by the addition of six members—the Chief Justice of Bengal, another judge, and four Company's servants of 10 years' standing appointed by the Governments of Bengal, Madras, Bombay, and the North-Western Provinces. At the same time the legislative councillor appointed under the Act of 1833 was made a member of the executive council for all purposes. The legislative council thus constituted was intended for purely legislative work, but it evinced what was considered an inconvenient tendency to interfere with the executive. The position was reconsidered, and the councils were remodelled by the Indian Councils Act, 1861. This Act provided that "the Governor-General shall nominate, in addition to the ordinary " and extraordinary members above mentioned, and to such Lieutenant-Governor in " the case aforesaid,* such persons, not less than six nor more than twelve in number " as to him may seem expedient to be members of council for the purpose of making " laws and regulations only . . . provided that not less than one-half of the persons " so nominated shall be non-official persons . . . ." The functions of the new legislative council were limited strictly to the consideration and enactment of legislative measures. At the same time the power of legislation, which had been taken away from the Governments of Madras and Bombay by the Act of 1833, was restored to them, the councils being similarly enlarged for legislative purposes, and the Governor-General in Council was empowered to set up legislative councils in other provinces. Not less than one-third of the members of any council so set up were to be non-officials. Legislative councils were established accordingly in Bengal in 1862, in the United Provinces in 1886, in the Punjab and Burma in 1898, and in Eastern Bengal and Assam in 1905.

The Indian Councils Act, 1892, authorised an increase in the size of the legislative councils and changes in the method of nomination, and relaxed to some extent the restrictions imposed on their proceedings by the Act of 1861. The numbers of members to be nominated for legislative purposes were now fixed at 10 to 16 for the Governor-General's Council, 8 to 20 for Madras and Bombay, not more than 20 for Bengal, and not more than 15 for the United Provinces, the minimum proportion of non-officials being left as before. At the same time powers by the exercise of which important advances were made were conferred by a subsection authorising the Governor-General in Council, with the approval of the Secretary of State in Council, to make " regulations as to the conditions under which such nominations, or any of " them, shall be made by the Governor-General, Governors, and Lieutenant-Governors " respectively." By regulations subsequently made the principle of election was tentatively introduced, and the proportion of non-officials was increased beyond the minimum laid down by the Act of 1861. The Governor-General's legislative council, for example, had to include 10 non-officials, of whom five were nominated on the recommendation of the Calcutta Chamber of Commerce and the non-official members of the legislative councils of Madras, Bombay, Bengal, and the United Provinces. In Bombay 8 out of 11 non-officials were nominated on the recommendation of various bodies and associations, including the Corporation, the University, groups of municipal corporations, groups of local district boards, classes of large landholders, and associations of merchants, manufacturers, or tradesmen. Similar provisions were made in regard to the legislative councils in Madras, Bengal, Eastern Bengal and Assam, and the United Provinces. In the case of the smaller councils of the Punjab and Burma no provision was made for recommendation; nor were the privileges, referred to immediately below, of discussing the provincial budget and of putting questions on matters outside the business in hand extended to them. The Act of 1892 further provided as follows:—"Notwithstanding any provisions in the Indian Councils Act, " 1861, the Governor-General of India in Council may from time to time make rules " authorising at any meeting of the Governor-General's Council for the purpose of " making laws and regulations the discussion of the annual financial statement of the " Governor-General in Council and the asking of questions, but under such conditions " and restrictions as to subject or otherwise as shall be in the said rules prescribed " or declared" . . . "But no member at any such meeting of any council shall " have power to submit or propose any resolution, or to divide the council in respect " of any such financial discussion, or the answer to any question asked under the " authority of this Act, or the rules made under this Act . . ." Similar provision was made for the provincial legislative councils. Action was taken under this section

* The Lieutenant-Governor of the province in which the council meets.

in all the more advanced provinces, and in the annual discussion on the financial statement members were allowed to draw attention to any financial matter they pleased, whether it arose directly out of the budget proposals or not. To sum up the position before the passing of the Act of 1909 : The legislative councils varied in size between a total strength of 9 (excluding the Lieutenant-Governor) in the Punjab and Burma and a maximum of 24 (excluding the Governor-General) in the case of the Governor-General's Council. A minimum proportion of non-officials was required by Statute, but though by Regulations under the Statute provision was made for the appointment of non-officials in excess of this proportion, an official majority of votes was as a rule available in a full council. (An exception to this general rule was to be found in Bombay, where in 1908 the council consisted of 10 officials, including the Governor, and 14 non-officials.) Of the non-officials, some, except in the Punjab and Burma, were nominated on recommendation, and might be regarded as "elected," in a somewhat qualified sense of the word. Finally, the activities of the councils were strictly limited, except on the occasion of the annual budget debate, which was apt to be of a desultory and unsatisfactory nature, to legislative business and the asking of questions.

The Indian Councils Act, 1909.—In a minute reviewing the political situation in India, Lord Minto in 1906 pointed out how the growth of education, encouraged by British rule, had led to the rise of important classes aspiring to take a larger part in shaping the policy of the Government. A committee of the Governor-General's Council was appointed to consider the group of questions arising out of these novel conditions. The subject of the constitution and functions of the legislative councils was publicly reopened by the announcement of the Governor-General, in a speech addressed to the Legislative Council on the 27th March 1907, that with the object of satisfying the constitutional requirements of the Indian Empire the Government of India had of their own initiative taken into consideration the question of giving the people of India wider opportunities of expressing their views on administrative matters. Later in the same year the Government of India, with the approval of the Secretary of State, invited the opinions of the local Governments on a number of proposals that they put forward, "subject to this essential condition, that the executive "authority of the Government is maintained in undiminished strength," in the belief that they represented "a considerable advance in the direction of bringing all classes "of the people into closer relations with the Government and its officers, and of "increasing their opportunities of making known their feelings and wishes in respect "of administrative and legislative questions." The proposals were exhaustively discussed in correspondence with the local Governments and later with the Secretary of State, in the course of which some of the suggestions originally made were dropped and others were introduced. The Secretary of State informed the Government of India of his decisions in November 1908, and the statutory powers required to carry some of them into effect were obtained from Parliament by means of the Indian Councils Act (9 Edw. 7. c. 4) in the following year. The Act was brought into operation on the 15th November 1909, and the new legislative councils met early in 1910.

The Act itself is couched in wide and general terms, and leaves all details, and some important questions of principle, to be determined by regulations and rules made by the authorities in India. The effect of the main alterations made in the law, so far as the legislative councils are concerned, may be stated quite briefly. In the first place, it was laid down that the members appointed for legislative purposes, instead of being all nominated, "shall include members so nominated and also members "elected in accordance with regulations made under this Act"; secondly, the maximum numbers of such members on the various councils were raised, being at least doubled and in most cases more than doubled; thirdly, the section of the Act of 1892, under which provision might be made for the discussion of the financial statement and the asking of questions, was repealed and replaced by the following: "Notwith-"standing anything in the Indian Councils Act, 1861, the Governor-General in "Council, the Governors in Council of Fort Saint George and Bombay respectively, "and the Lieutenant-Governor or Lieutenant-Governor in Council of every province, "shall make rules authorising at any meeting of their respective legislative councils "the discussion of the annual financial statement of the Governor-General in Council "or of their respective local Governments, as the case may be, and of any matter of "general public interest, and the asking of questions, under such conditions and "restrictions as may be prescribed in the rules applicable to the several councils."

The actual numbers of members to be nominated and elected (within the maximum limits laid down), the numbers required to form a quorum, the term of office, the conditions under which and manner in which members should be nominated and elected, and the qualifications for membership, were left to be determined by regulations to be made by the Governor-General in Council, subject to the approval of the Secretary of State in Council.

Regulations and rules were laid down accordingly for each legislative council separately. A brief account of their effect and purport only can be given here. For detailed information reference must be made to the Parliamentary Papers quoted above.

The New Councils.—The tabular statement below shows how the legislative councils were increased in size, and how one other change of the first importance was effected, by the new regulations. A majority of officials was retained in the Governor-General's Council; but the regulations provide for a majority of non-official members in every provincial council. It is within the power of a local Government further to increase the proportion of non-officials by nominating less than the maximum number of officials and substituting non-officials (as was done in Bombay, as pointed out above, under the old regulations). The figures in *italics* show the constitution of the new councils established in 1912 and the changes made in some of the other councils by the new regulations issued in that year :—

Legislative Council of	Numbers previous to 1909.			Maximum Total Number of Nominated and Elected Members under the Act of 1909.	Numbers under the new Regulations.		
	Officials (Maximum Number, including Members of Executive Councils).	Non-officials.			Officials (Maximum Number, including Members of Executive Councils as at present constituted).	Non-officials.	
		"Elected," *i.e.*, Nominated on Recommendation.	Nominated (Minimum Number).			Elected.	Nominated (Minimum Number).
India	14	5	5	60	36	25(*27*)	7(*5*)
Madras	12	7	4	50	20	19(*21*)	7(*5*)
Bombay	12	8	3	50	18	21	7
Bengal	10	7	3	50	20(*19*)	26(*28*)	5(*4*)
United Provinces	7	6	2	50	20	20(*21*)	6
Eastern Bengal and Assam	7	6	2	50	17	18	5
Punjab	4	—	5	30	10	5(*8*)	9(*6*)
Burma	5	—	4	30	6	1	8
Bihar and Orissa	—	—	—	*50*	*18*	*21*	*4*
Assam	—	—	—	30	*9*	*11*	*4*

Note.—These figures exclude in each case the head of the Government and the one or two experts who may under the new regulations be appointed to any provincial council when legislation demanding expert advice is in hand. If such are appointed, they may be either officials or non-officials. Otherwise the figures show the councils at their full strength, including the members of the executive councils where such exist.

The regulations and rules as to elections and nominations were framed in each province with reference to local conditions, with the object of obtaining, as far as possible, a fair representation of the different classes and interests in the province.

The elected portion of the Governor-General's Council consists of members elected by the non-official members of the provincial councils, by the landholders, and by the Muhammadan communities, in the various provinces, with representatives of the Bengal and Bombay Chambers of Commerce and of the district councils and municipal committees in the Central Provinces. In the provincial councils seats are provided in most cases for elected representatives of the landholders, the municipalities and district boards, the Muhammadan community, the Chamber of Commerce, and the University. The few remaining seats are allotted with a view to special local interests. Thus representatives are elected (one in each case) by the corporations of Calcutta, Madras, and Bombay, by the planting community in Madras, by the Indian commercial community and by the millowners in Bombay, and by the tea interest in Assam. The procedure as to elections is very varied and in many cases very complicated. Some of the main points only can be noticed.

Some general provisions are common to all the provinces. Females, minors, and persons of unsound mind may not vote, neither are they eligible for election. Persons coming under certain other heads (including Government officers) are also declared ineligible for election. Members must, before taking their seats, make an oath or affirmation of allegiance to the Crown. The term of office is ordinarily three years. Corrupt practices render an election invalid.

(Administration.)

Subject to these general provisions, the positive qualifications for electors and candidates, and the methods of election, are laid down in the detailed rules for the various electorates. They vary considerably from province to province, even in the case of similar electorates. Some seats proposed to be filled by election as soon as workable electorates can be found are at present filled by nomination. Thus the representative of Indian commerce is at present nominated, except in the case of the Bombay council.

The retention of a number of non-official seats filled by nomination in each council makes it possible to provide for the representation of minor interests and smaller classes as the particular needs of the moment and the claims of each community may from time to time require.

The Act and regulations of 1909 made no alteration in the legislative functions and powers of the councils. These are still regulated mainly by the Act of 1861, which included provisions precluding the Indian legislatures from making laws affecting the provisions of Acts of Parliament (save in the case of the Imperial Council, which may, generally speaking, repeal or amend such Acts passed prior to 1860), and specifying, for the Governor-General's Council and the provincial councils respectively, various heads under which legislation cannot be undertaken without the previous consent of the Governor-General. In the case of the Governor-General's Council, this consent must be obtained before any Bill is brought forward which affects religion, the public debt or revenues, the army or navy, or foreign relations; in the case of the provincial councils, the same restriction applies also to Bills affecting the currency, the transmission of postal or telegraphic messages, the Indian Penal Code, patents or copyright. The powers of the local legislatures are strictly territorial, but beyond this no precise line of demarcation is drawn between their legislative spheres and that of the Governor-General's Council. Generally speaking, the Governor-General's Council legislates only in cases where uniformity throughout British India is desirable, or in matters beyond the competency of the local legislatures, or for provinces which have no local legislatures of their own.

The changes made in regard to the discussion of the year's finance are, briefly, that the discussion extends over several days instead of one or two, that it takes place before, instead of after, the budget is finally settled, and that members have the right to propose resolutions and to divide the council upon them. As indicating the nature of the new rules, a brief summary of the rules laid down for the Governor-General's Council may be given. The first stage is the presentation of the "Financial Statement" (*i.e.*, the preliminary financial estimates for the next year), with an explanatory memorandum. On a subsequent day this is taken into consideration, and any member may move a resolution regarding any alteration in taxation, any new loan, or any additional grant to local Governments proposed. The second stage is the discussion of the statement by heads or groups of heads. A resolution may be moved with reference to any question covered by a head as it comes under discussion. Certain subjects (including foreign relations and relations with native states and matters under adjudication by a court of law) and certain heads of revenue and expenditure (including, under revenue, customs and assessed taxes, and, under expenditure, interest on debt, political, state railways, and army) are excluded from discussion. Finally the "Budget" (*i.e.*, the financial statement as finally settled by the Governor-General in Council) is presented to the council by the finance member, who, if any resolution passed in council has not been accepted, explains why. The Budget is subsequently discussed, but resolutions are not at that stage permitted, nor is the Budget put to the vote.

Similarly, rules are laid down for the discussion of matters of general public interest (excluding, as before, foreign relations and relations with native states, and matters under adjudication by courts of law), on resolutions moved by members. As in the case of the financial statement, a resolution must be in the form of a specific recommendation addressed to the Governor-General in Council, and, if carried, has effect only as such.

A time limit of 15 minutes is laid down, as a general rule, for speeches, and provision is made for the handing in of printed speeches, which may be taken as read. In the new rules for the asking of questions, an important change is that a member who has asked a question is allowed to put "a supplementary question for "the purpose of further elucidating any matter of fact regarding which a request for "information has been made in his original question."

The rules as to discussions and resolutions in the various provincial councils differ little in essentials from those of the Governor-General's Council. One distinguishing feature, however, is that in the case of the local financial statements the first stage is an examination by a committee of the council consisting of not more than 12 members, six nominated by the head of the Government and six elected by the non-official members.

A passage from the Government of India's Resolution of the 15th November 1909 may be quoted as summarising the total effect of the changes then made in the constitution and functions of the legislative councils: "The constitutional changes "that have been effected are of no small magnitude. The councils have been greatly "enlarged; the maximum strength was 126; it is now 370. All classes and "interests of major importance will in future have their own representatives. In "the place of 39 elected members there will now be 135; and while the electorates "of the old councils had only the right to recommend the candidate of their choice "for appointment by the head of the Government, an elected member of the new "councils will sit as of right, and will need no official confirmation. Under the "Regulations of 1892 officials were everywhere in a majority; the Regulations just "issued establish a non-official majority in every provincial council. Nor has reform "been confined to the constitution of the councils; their functions also have been "greatly enlarged. A member can now demand that the formal answer to a question "shall be supplemented by further information. Discussion will no longer be "confined to legislative business and a discursive and ineffectual debate on the "budget, but will be allowed in respect of all matters of general public interest. "Members will in future take a real and active part in shaping the financial proposals "for the year; and as regards not only financial matters but all questions of "administration they will have liberal opportunities of criticism and discussion and "of initiating advice and suggestions in the form of definite resolutions. The "Governor-General in Council feels that these momentous changes constitute "a generous fulfilment of the gracious intention, foreshadowed in the King-"Emperor's message, to entrust to the leaders of the Indian peoples a greater share "in legislation and government, and he looks forward with confidence to these "extensive powers being loyally and wisely used by them, in association with the "holders of executive authority, to promote the prosperity and contentment of all "classes of the inhabitants of this great country."

Regulations for the new legislative councils in Bengal, Bihar and Orissa, and Assam, and revised regulations for the other councils, were promulgated in 1912. No changes of principle were introduced, the amendments for the most part relating to matters of detail and being intended to simplify and render more convenient the electoral procedure. The effects on the constitution of the councils are shown in the table above. The creation of new provinces necessitated some changes in the Governor-General's Council, and the opportunity was taken to effect some changes also in the distribution of seats in Madras, the United Provinces, and the Punjab—in the first case with a view to the more equitable representation of the landholders and local bodies, in the second mainly in consequence of a rearrangement of divisional charges, and in the third with the object of increasing the number of elected members and of giving representation to district boards, as in other provinces. The regulations of 1909 for the Punjab were framed, as regards elective representation, on cautious lines, owing to the comparative backwardness of the province, and no district board electorate was then constituted. Various small changes were made as regards the qualifications of voters and candidates and electoral procedure.

The Process of Legislation.—A contentious measure dealt with by the Governor-General's Legislative Council must ordinarily pass through the following stages before it becomes law: (i) motion, after due notice, for leave to introduce a Bill, followed by its formal introduction and publication for criticism; (ii) reference of the Bill, with any opinions received, to a Select Committee. This marks the most important stage, when the principle of the measure ought to be discussed, and approved or disapproved. In Select Committee, of which the Law Member is always chairman, the details are scrutinised, suggestions are considered, and the draft is amended; (iii) presentation of the Select Committee's report to the Council; (iv) consideration in council of the Select Committee's report, and of any further amendments that may be brought forward; (v) motion that the Bill, as amended, be passed; (vi) signature of the President to the Bill as passed, and of the Governor-General by way of assent. Except in the case of an Act reserved by the Governor-General for the signification

of His Majesty's pleasure, the assent of the Crown is not necessary to the validity of an Act, but any Act may be disallowed by the Crown. In the case of a non-contentious measure some of these steps may be omitted; and, on the other hand, it is sometimes necessary to pass a Bill without delay, and the rules have on occasion been suspended so completely as to allow a Bill to pass through all its stages at a single sitting.

The procedure in the provincial councils, though differing in details, is on the same general lines.

Special Methods of Legislation.—The normal method of legislation throughout by far the greater part of British India is by means of Acts passed by the various legislative councils, and the power of the Governor-General's Council to legislate for the whole or any part of British India makes it possible to legislate in this way for provinces that have no legislative councils of their own. Special provision has, however, been made for some special cases.

Ordinances.—In the first place, reference should again be made here to the power that the Governor-General has, under the Indian Councils Act of 1861, of promulgating in cases of emergency ordinances "for the peace and good government" of any part of the country; these are invested with the same force and effect as enactments of the legislature, but cannot remain in operation for more than six months. The power has been exercised only seven times.

Regulations.—For the less advanced parts of the country a special method was made available by the Government of India Act of 1870. It is comparable to the method of legislation by executive order which prevailed generally before 1834, and in the "non-regulation" provinces up to 1861. This Act empowers the Governor-General in Council to take into consideration drafts of Regulations submitted by the head of any of the provincial administrations "for the peace and government of any "part or parts of the territories under his government or administration to which the "Secretary of State for India shall from time to time by resolution in Council" declare these provisions to be applicable. If the draft is approved by the Governor-General in Council, and receives the Governor-General's assent, it is published in the Gazette of India and the local Gazette, and the Regulation thereupon has the same force of law as if it had been formally passed, in the shape of a Bill, by the legislative council. Among the areas to which this method of legislation has been made applicable may be mentioned Aden, Perim, the Hill Tracts of Chittagong, the Sonthal Parganas, parts of the Punjab and North-West Frontier Province, including the Hazara, Peshawar, Kohat, and Bannu districts, Coorg, the Andaman and Nicobar Islands, Ajmer-Merwara, Assam, Upper Burma, and British Baluchistan. A large number of Regulations have been made under this Act. Copies of all Regulations must be submitted to the Secretary of State in Council, and they are, like Indian Acts, subject to disallowance by the Crown.

The "Scheduled Districts."—Finally, it may be noticed that the tracts to which the Act of 1870 is applied, and others specially "scheduled," may be dealt with under an Act of the Indian Legislature (the Scheduled Districts Act, 1874), which empowers the Government to declare what enactments are actually in force, or not in force, in any such tracts, and to extend to them, with or without modification, any enactment in force elsewhere in British India.

District Administration.—The Indian system of administration is based on the repeated subdivision of territory, each administrative area being in the responsible charge of an officer who is subordinate to the officer next in rank above him. The most important unit is the "district"; and a province may be regarded as consisting of a collection of districts, which are usually split up into subdivisions, and these again into smaller circles. British India contains some 267 districts; the average area of a district is thus over 4,000 square miles, and the average population over 900,000. The actual districts vary greatly in size and density of population. The Vizagapatam district, in Madras, has an area of 17,223 square miles with a population of over three millions; the Upper Chindwin district, in Burma, has an even larger area, of over 20,000 square miles, but a population of only 170,000; while the Mymensingh district, in Eastern Bengal, has a population of over 4½ millions on an area of 6,347 square miles. Very few districts have an area of less than 1,500 square miles, or a population of less than half a million.

In former times a sharp distinction was to be drawn between those provinces that were, and those that were not, governed under the old Bengal, Madras, and Bombay

"Regulations." The "regulation" provinces were Bengal, Madras, Bombay, and Agra. The less advanced provinces acquired at a later time were generally ruled under a system by which larger powers and a larger discretion was allowed to officers, and in accordance with simpler codes, based on the spirit of the regulations but modified to suit the circumstances of each special case. The provinces were thus distinguished as "regulation" or "non-regulation." So far as legislation is concerned, the contrast is no longer between the old regulation and non-regulation areas, but between backward tracts for which the Government of India, as mentioned above, can still legislate executively (*i.e.*, by "Regulations"), and the rest of British India, where, ordinarily, legislation can only be accomplished by means of a legislative council. In other respects also the distinction between the more advanced "non-regulation" provinces and the "regulation" provinces has practically disappeared, but certain differences in administrative arrangements remain. It will be convenient in the first place to describe the system prevailing in what were the "regulation" provinces, and afterwards to indicate the special features of the administration of the remaining provinces.

The "Regulation" System.—In Madras there is no local officer above the head of the district (who is styled in the regulation provinces Collector and Magistrate). Elsewhere a Commissioner of division is intermediate between the Collector and the provincial Government. A division is a group of several districts, usually from four to six, of which the Commissioner has the general superintendence, and in which he also acts as a court of appeal in revenue cases. In the regulation provinces the Commissioner is always a senior officer of the Indian Civil Service. The Commissioners originally exercised judicial as well as administrative and revenue functions, and held periodical jail deliveries in the districts under their supervision. These judicial duties were later transferred to the District Judges.

The Collector and Magistrate is the representative of the Government in the district under his charge; as his two-fold appellation indicates, he is both the principal revenue official and the chief magistrate. He is concerned in the first place with the land and the land revenue, and with all matters affecting the condition of the peasantry; he has charge also of the local administration of excise, income tax, stamp duty, and other sources of revenue, and he is responsible for the management of the district treasury. As a magistrate of the first class, the Collector, in his capacity of District Magistrate, can imprison for two years, and fine up to Rs. 1,000; in practice he does not try many criminal cases, though he supervises the work of all the other magistrates of the district. He is responsible for the peace of the district and the suppression of crime, and has general control over the working of the police. In addition to these two main departments of work, the Collector has to interest himself in all matters affecting the well-being of the people. In some branches of the administration his functions are, in consequence of the formation of special departments, such as those of public works, forests, sanitation, and education, less direct than was formerly the case, but even in these cases his active co-operation and counsel are still needed. He is also, usually, the chairman of the district board, and guides and controls to a large extent the working of municipal institutions. For the proper discharge of his many duties, the collector-magistrate must be accessible to and intimately acquainted with the inhabitants of his district, and accordingly spends as a rule several months of the year in camp, visiting all parts of the area under his charge.

The collector-magistrate has the assistance of a large staff of subordinate officers, some of whom are his assistants at headquarters, while others hold charge of portions of the district. In general the districts are split up into "subdivisions," under junior officers of the Indian Civil Service or members of the provincial service, styled Deputy Collectors, and these again into minor charges bearing different names and held by officers of the subordinate service. The subdivisional officer has, under the control of the Collector, general charge of the executive and magisterial administration of his subdivision. The administrative arrangements within the subdivision vary considerably in different provinces. At the basis of the system the Indian village organisation, which is of great antiquity, still finds its place, with the modifications necessitated by the greater control and complexity of our system of government, in the fabric of British rule. Of the village officials, who are largely hereditary, the most important are the headman, who collects the revenue and in some provinces, particularly in Madras and Burma, may be also a petty magistrate or civil judge; the

(Administration.)

karnam, *karkun*, or *patwari*, who keeps the village accounts, registers of holdings, and in general all records connected with the land revenue; and the *chaukidar* or village watchman, who is the rural policeman.

"*Non-Regulation*" *Provinces.*—The extent to which the non-regulation systems diverge from that just described varies in different provinces in accordance with their importance and the progress they have made. One important point of difference is that the higher posts are not wholly reserved to the Indian Civil Service. In former times members of the "commissions" of the non-regulation provinces were drawn from a variety of sources; recruitment is now, in general, confined to the Indian Civil Service and officers of the Indian Army, and, the recruitment of military officers having been discontinued in the Punjab since 1903, and in Assam since 1906, Burma is the only major province in which military as well as civilian officers are still recruited for the commission. The executive head of the district is styled "Deputy Commissioner" and not Collector, while those of his subordinates who belong to the commission are called "Assistant Commissioners" and members of the provincial service "Extra Assistant Commissioners." The district administration runs on the same lines as in the regulation provinces; but the district magistrates and some of their first-class subordinates exercise more extensive criminal jurisdiction. They may be invested with power to try all cases not punishable with death, and to inflict sentences of imprisonment or transportation up to seven years.

In non-regulation provinces the Deputy Commissioner and his assistants used to be charged with the administration of civil as well as criminal justice, and the Commissioner took the place of the civil and sessions judge; but in all the larger provinces (except Upper Burma) the Commissioner has been relieved of his judicial functions, which have been committed to a separate staff of judges, and district officers generally have now little to do with civil litigation, for which separate courts have been established.

In the minor provinces (including under this head the North-West Frontier Province, British Baluchistan, Delhi, Coorg, Ajmer-Merwara, and the Andaman and Nicobar Islands) the administrative arrangements outlined above are necessarily modified to a greater or less extent, as a result of the special conditions or small area of the charges. The North-West Frontier Province and British Baluchistan are divided into districts, administered by Deputy Commissioners as in the larger non-regulation provinces. In the former province there are between the Deputy Commissioners and the Chief Commissioner separate Revenue and Judicial Commissioners; in British Baluchistan a single officer is both Revenue and Judicial Commissioner.

The Civil Services.—The Civil Service in India, through whom the general work of administration and, for the most part, the administration of justice, are carried out, consists as at present constituted of three branches—the Indian Civil Service, recruited in England, which corresponds to the old Covenanted Civil Service; and the Provincial and Subordinate Civil Services, recruited in India from among natives of India.

The Indian Civil Service is recruited in England by competitive examination open to all natural-born British subjects. Selected candidates, before proceeding to India, are on probation for one year, at the end of which time they are required to pass an examination in subjects specially connected with their future duties. On arrival in India, the young civilian is posted to the headquarters of a district to learn his work, and is given the powers of a magistrate of the lowest class. After passing the prescribed examinations—mainly in law, languages, and revenue procedure—he becomes a first-class magistrate, and is eligible for promotion to higher grades. Promotion carries him in course of time either to the executive posts described above (Collector and Magistrate, &c.); or, if he is assigned to the judicial branch of the service, to the corresponding appointments on that side (District and Sessions Judge, &c.).

The total sanctioned strength of the Indian Civil Service cadre (including the posts held by military officers in the commissions of some provinces) at the end of the period under review was 1,341; the actual strength was rather greater, that of the Indian Civil Service itself being about 1,300, including 60 or 70 Indians. The total number is no greater than is required to fill the majority of the highest offices, with such a proportion of less important posts as provides a course of training for the younger men. Twenty-four Indians entered the service during the period covered by

this report through the competitive examination held in this country, but the number of Indians who have obtained appointments in this way has never been large, and special provision has been made accordingly for the appointment of Indians in India to a certain proportion of the posts that would otherwise be held by members of the Indian Civil Service. By an Act of 1861 (the Indian Civil Service Act, 24 & 25 Vict., c. 54), it was laid down that all vacancies in certain scheduled offices (which included practically all the higher appointments in the regulation provinces) should ordinarily be filled from the Covenanted Civil Service. Provision was at the same time made for the appointment in special cases of other persons, subject to certain conditions, to any of these offices. Appointments are still occasionally made by virtue of this power, mostly in temporary vacancies, but it was never utilised for systematic recruitment. Further provision for recruitment in India was made by the Government of India Act, 1870, which, with a view to providing additional facilities for the employment in the civil service of natives of India of proved merit and ability, authorised the appointment of any native of India to any office in the civil service, subject to such rules as might be laid down by the Government of India with the approval of the Secretary of State in Council ("native of India" being defined as including for the purposes of this Act any person born or domiciled in British India of parents habitually resident there). This provision was not brought into effective operation until 1879, when regulations were issued establishing what was called the "Statutory Civil Service," to which the ultimate transfer of one-sixth of the total number of Indian Civil Service appointments was contemplated. During the seven years following the introduction of these regulations about 60 persons were appointed under them, but the results were unsatisfactory, and this method of recruitment was abandoned in favour of the plan proposed by the Public Service Commission of 1886–87. On the advice of this Commission, the Civil Service was divided into the three branches mentioned above. The members of the provincial services (styled the Bengal Civil Service, the Madras Civil Service, and so on) fill the important executive, judicial, and administrative posts not held by members of the Indian Civil Service, including the higher appointments formerly held by the "Uncovenanted" Civil Service, and a certain number of posts originally reserved for the Covenanted Service. (On the introduction of the new system, the terms "Covenanted Service" and "Uncovenanted Service" were abolished.) Lists of the posts of the latter class open to the provincial service published in 1892–93 included 93 appointments (known as "listed" posts). Some additions have since been made to the list, which in 1912 included altogether 103 posts. Of these, 56, mostly headships of districts and district and divisional judgeships, were of the class known as "superior" (*i.e.*, posts carrying a salary of over Rs. 1,000 a month).

The rules under which appointments are made to "listed" posts further provide that natives of India "of proved merit and ability" who are not members of the provincial service may be appointed to "listed" posts, provided that not more than one-fourth of the total number of such posts are so filled.

Admission to the provincial services is regulated by rules framed by the local Governments and approved by the Government of India. Sometimes it is by nomination, sometimes by examination, and sometimes by promotion from the subordinate service. The total strength of the provincial services is about 2,450, of whom the great majority are Indians. The service is divided into executive and judicial branches, the former including appointments of deputy collector and magistrate, &c., and the latter those of subordinate judge, &c. The subordinate services include the holders of minor posts, including the lower grade appointments formerly held by the Uncovenanted Civil Service.

Specialised Departments.—The multifarious duties that devolve upon Goverment in India are shared with the general civil service by the numerous specialised departments that have been created from time to time. When public education and the development of the country were in their infancy, the control of almost all branches of the administration was vested in members of the Covenanted Service. As the improvement of the administration, the education of the people, and the construction of roads, railways, and irrigation works progressed, demands arose for officers of special training and experience. The development of the Agricultural Department within the last ten years illustrates the growth of a department consisting of officers of this kind. Among the other special services may be mentioned the Public Works Department, the Survey of India, and the Postal, Telegraph, Education, Police, Salt, Civil Medical

and Civil Veterinary Departments. These services are variously organised according to the degree in which they are controlled by the Government of India and the provincial Governments respectively.

The Employment of Indians in the Public Service.—Reference has been made earlier in this chapter to the appointment of Indian gentlemen recently, for the first time, to some of the highest posts connected with the government of India. Since 1907 two seats on the Council of the Secretary of State for India have been held by Indian gentlemen, and since 1909 the law member of the Governor-General's Council has been an Indian lawyer. In 1910 Indian members were added to the executive councils in Madras and Bombay, and one was appointed to the newly-created executive council in Bengal. The existing council in Bengal and the new executive council in Bihar and Orissa have each an Indian member. As regards the legislative councils, the great increase in their size involves a more than corresponding increase in the proportion of Indian members. A considerable proportion of the highest judicial appointments are held by Indians: at the end of the decade 14 occupied seats in the four High Courts, and two were judges in the Chief Courts and Judicial Commissioners' Courts in the other provinces.

The manner in which Indians share in the appointments in the general civil service has been explained above. They now fill by far the greater part of the total number of executive, magisterial, and judicial posts. The work of the civil courts, excepting the courts of appeal, is almost entirely entrusted to Indian judges.

In the specialised departments the same principles as to the employment of Indians are generally applied. In the larger services there are as a rule "Imperial" branches, recruited in England, and Provincial and Subordinate branches recruited in India. Everywhere the European element is limited to the proportion considered essential for efficiency and guidance. The extent to which European agency is employed varies with the nature of the work, being greater where it demands knowledge and acquirements of which the supply in India is still deficient, or where, as in the case of the police, a large measure of European control is considered necessary. A rule has been in force since 1879 to the effect that no person other than a native of India (which expression here again includes persons of European descent born and domiciled in the country) may be appointed in India to an office carrying a salary of Rs. 200 a month or upwards, except in certain departments and in certain specified cases, without the previous sanction of the Governor-General in Council in each case.

The Government of India published in 1904 the results of an exhaustive inquiry as to the proportion of posts held by Europeans and Indians respectively, covering the whole period from 1867 to 1903, and taking into account all civil appointments on a pay of Rs. 75 a month (now equal to £60 a year) and over, below which limit practically all posts are held by Indians. The figures show a continuous increase, in every grade of appointments, of the proportion of Indians. The numbers of appointments held by the various classes in five separate years are given in the following table:—

Year.	Appointments on less than Rs. 1,000 a month.				Appointments on Rs. 1,000 a month* and over.			
	Europeans.	Eurasians.	Hindus.	Muhammadans.	Europeans.	Eurasians.	Hindus.	Muhammadans.
1867	4,128	2,629	5,078	948	632	4	12	—
1877	4,706	3,443	7,432	1,175	995	5	18	1
1887	5,147	4,164	9,733	1,388	1,007	—	24	3
1897	5,017	4,965	12,249	1,832	1,227	11	56	13
1903	5,205	5,420	14,131	2,152	1,263	15	71	21
1910	Figures not available.				1,721		134	27

* Now equal to £800 a year.

The aggregate salaries of the posts held in 1903 by the four classes of officers respectively (still taking into account only appointments on Rs. 75 a month and over) were, in round figures, as follows:—Europeans, £3,590,000; Eurasians, £844,000; Hindus, £2,116,000; Muhammadans, £341,000. No equally full figures for subsequent years are available, but the distribution of posts on Rs. 1,000 a month and over in 1910 is shown in the table.

The Decentralization Commission.—The continually increasing volume of work falling upon the Governments in India and their officers necessarily involves from time to

time further delegation from higher to lower authorities of powers the constant exercise of which by the former becomes inconsistent with efficient administration. This whole question was definitely taken up in September 1907, when a Royal Commission was appointed, with Mr. C. E. H. Hobhouse, M.P., then Parliamentary Under Secretary of State for India, as chairman, "to enquire into the relations now "existing for financial and administrative purposes between the Supreme Government "and the various Provincial Governments in India, and between the Provincial "Governments and the authorities subordinate to them, and to report whether, by "measures of decentralization or otherwise, those relations can be simplified and "improved, and the system of government better adapted both to meet the require-"ments and promote the welfare of the different provinces, and, without impairing "its strength and unity, to bring the executive power into closer touch with local "conditions."

The Commission held public sittings in all the major provinces in India, and in the North-West Frontier Province and Baluchistan, and examined a large number of witnesses, including many non-officials. The report, published in 1909,* includes a "general summary" containing 134 conclusions and recommendations, which, though many of them important, relate for the most part to details of administrative procedure and cannot well be further summarised. The general effect was to recommend the delegation of larger powers in various directions both to the local Governments and to local officers and authorities from the boards of revenue and financial commissioners down to village officers. References to action taken in accordance with some of the Commission's recommendations will be found in the portions of this Statement dealing separately with various branches of the administration.

The Royal Commission on the Public Services in India.—Since the end of the period under review a Royal Commission, with Lord Islington as chairman, has been appointed "to examine and report upon the following matters in connection with the Indian Civil Service, and other civil services, Imperial and Provincial:—

"(1) The methods of recruitment and the systems of training and probation;
"(2) The conditions of service, salary, leave, and pension;
"(3) Such limitations as still exist in the employment of non-Europeans and the working of the existing system of division of services into Imperial and Provincial;

"and generally to consider the requirements of the Public Service, and to recommend such changes as may seem expedient."

The Commission assembled in India at the end of 1912.

A list of the holders of the most important offices during the ten years under review is given on the next page, officiating appointments being shown in *italics*.

(Administration.)

	Assumed charge of Office.
Secretary of State.	
Lord George F. Hamilton	5 July 1895.
The Rt. Hon. St. John Brodrick [Viscount Midleton, April 1907].	10 Oct. 1903.
The Rt. Hon. John Morley [Viscount Morley of Blackburn, May 1908].	12 Dec. 1905.
The Earl of Crewe	8 Nov. 1910.
Viscount Morley of Blackburn	7 March 1911.
The Earl of Crewe [Marquess of Crewe, June 1911].	25 May 1911.
Permanent Under-Secretary of State.	
Sir Arthur Godley [Lord Kilbracken of Killegar, Nov. 1909].	30 Sept. 1883.
Sir Richmond Ritchie	11 Oct. 1909.
Parliamentary Under-Secretary of State.	
The Earl of Hardwicke	17 Jan. 1901.
Earl Percy, M.P.	18 Aug. 1902.
The Earl of Hardwicke	12 Oct. 1903.
The Marquess of Bath	20 Jan. 1905.
The Rt. Hon. J. E. Ellis, M.P.	12 Dec. 1905.
The Rt. Hon. C. E. H. Hobhouse, M.P.	1 Feb. 1907.
The Rt. Hon. T. R. Buchanan, M.P.	16 April 1908.
The Master of Elibank, M.P. [Lord Murray of Elibank, August 1912].	29 June 1909.
The Hon. E. S. Montagu, M.P.	21 Feb. 1910.
Governor-General.	
Lord Curzon of Kedleston [Earl Curzon of Kedleston, June 1911].	6 Jan. 1899.
Lord Ampthill	*30 April 1904.*
Lord Curzon of Kedleston	13 Dec. 1904.
The Earl of Minto	18 Nov. 1905.
Lord Hardinge of Penshurst	23 Nov. 1910.
Governor of Madras.	
Lord Ampthill	28 Dec. 1900.
James (now Sir James) Thomson	*April—Dec. 1904.*
Gabriel (now Sir Gabriel) Stokes	*15 Feb. 1906.*
Sir Arthur Lawley	28 March 1906.
Sir Thomas Gibson-Carmichael [Lord Carmichael of Skirling, Feb. 1912].	3 Nov. 1911.
Sir Murray Hammick	30 March 1912.
Governor of Bombay.	
Lord Northcote	17 Feb 1900.
Sir James Monteath	*5 Sept. 1903.*
Lord Lamington	12 Dec. 1903.
J. W. P. (now Sir John) Muir-Mackenzie.	*28 July 1907.*
Sir George Sydenham Clarke [Lord Sydenham of Combe, Jan. 1913].	18 Oct. 1907.
Lieutenant-Governor of Bengal.	
Sir John Woodburn	7 April 1898.
J. A. (now Sir James) Bourdillon	22 Nov. 1902.
Sir A. H. L. Fraser	2 Nov. 1903.
L. (now Sir Lancelot) Hare	*April—Aug. 1906.*
F. A. Slacke	*August—Oct. 1906.*
Sir E. N. Baker	1 Dec. 1908.
F. W. (now Sir Frederick) Duke	*14 July 1911.*

	Assumed charge of Office.
Chief Commissioner of Assam.	
H. J. S. (now Sir Henry) Cotton	27 Nov. 1896.
J. B. (now Sir J. Bampfylde) Fuller	20 Oct. 1902 (*also April—Oct.* 1902).
C. W. Bolton	*April—July 1903.*
Lieutenant-Governor of Eastern Bengal and Assam.	
J. B. (now Sir J. Bampfylde) Fuller	16 Oct. 1905.
L. (now Sir Lancelot) Hare	20 Aug. 1906.
Sir C. S. Bayley	*22 Aug. 1911 (also from May to Nov. 1908).*
Lieutenant-Governor of the United Provinces.	
Sir James La Touche	14 Nov. 1901.
Sir John P. Hewett	1 Jan. 1907.
L. A. S. (now Sir Leslie) Porter	*April—Oct. 1910 and April—Dec. 1911.*
Lieutenant-Governor of the Punjab.	
W. M. (now Sir William Mackworth) Young.	6 March 1897.
Sir Charles Rivaz	6 March 1902.
Sir Denzil Ibbetson	6 March 1907 (*also April—Oct. 1905*).
T. G. (now Sir Thomas Gordon) Walker.	*May—Aug. 1907 and Jan. —May 1908.*
Sir Louis Dane	25 May 1908.
J. M. (now Sir James) Douie	*April—Aug. 1911.*
Lieutenant-Governor of Burma.	
Sir F. W. R. Fryer	1 May 1897.
Sir Hugh Barnes	4 April 1903.
Sir H. T. White	9 May 1905.
Sir Harvey Adamson	19 May 1910.
Chief Commissioner of the Central Provinces.	
A. H. L. (now Sir A. H. L.) Fraser	5 March 1902.
J. P. (now Sir John) Hewett	2 Nov. 1903 (*also Sept. 1902 —Nov. 1903*).
F. S. P. (now Sir Frederic) Lely	23 Dec. 1904 (*also March—Dec. 1904*).
J. O. (now Sir John) Miller	4 May 1905.
S. (now Sir Stanley) Ismay	*July—Oct. 1906.*
F. A. T. Phillips	*5–25 March 1907 and May—Nov. 1909.*
R. H. (now Sir Reginald) Craddock	25 March 1907.
H. A. Crump	*Jan.—Feb. 1912.*
M. W. Fox-Strangways	*17 Feb. 1912.*
Chief Commissioner of the North-West Frontier Province.	
Lieut.-Col. H. A. (afterwards Sir Harold) Deane.	9 Nov. 1901.
Lieut.-Col. G. O. (now Sir George) Roos-Keppel.	8 July 1908.
W. R. H. Merk	*Nov. 1909—Oct. 1910.*

NOTE.—With effect from 1st April 1912 Lord Carmichael became Governor of Bengal, Sir C. S. Bayley, Lieutenant-Governor of Bihar and Orissa, and Sir A. Earle Chief Commissioner of Assam. Lord Pentland became Governor of Madras in October 1912, and Sir Thomas Holderness Permanent Under-Secretary of State in the same month, on the death of Sir Richmond Ritchie. Lord Willingdon became Governor of Bombay in April 1913.

CHAPTER V.

LAW AND LEGISLATION.

The indigenous law of India is personal, and divisible with reference to the two main classes of the population, Hindu and Muhammadan. Both systems claim divine origin through revelation, and are inextricably interwoven with religion, and each exists in combination with a law based on custom.

Except in the case of the island of Bombay, which was obtained through cession in full sovereignty from Portugal, wherever the English first settled in India they did so with the licence of a Native government. But for various reasons their submission to native law did not follow; the earliest charters assumed that the English had brought their own legal system with them, and that of 1726 introduced the common law and the older Acts of Parliament into the three Presidency towns as regards Europeans. At first the tendency of the English was to make their law public and territorial and to apply it to Europeans and Indians alike; but Acts passed towards the end of the eighteenth century directed that as against a Hindu the Hindu law and usage, and as against a Muhammadan the laws and customs of Islam, should be applied. Owing, however, to the influence of Western jurisprudence, to the case-law emanating from courts established and moulded on English models, to the advance of enlightened ideas, and to the progress of education, the rules of the Shastras and the Koran have gradually been altered and relaxed. Substantial modifications have, moreover, inevitably been made by direct legislation, such as that contained in the Bengal Sati Regulation, 1829, the Caste Disabilities Removal Act, 1850, the Hindu Widows' Remarriage Act, 1856, the Criminal and Civil Codes, and the tenancy and rent laws passed for the different provinces. The position at the present day has been summarised as follows:—"Native law has been wholly superseded, as to "criminal law and procedure and as to civil procedure, by the Indian Penal Code, "the Indian Codes of Criminal and Civil Procedure, the Evidence Act, and other "enactments, and has been largely superseded as to other matters by Anglo-Indian "legislation, but still regulates, as personal law, most matters relating to family law "and to the law of succession and inheritance among Hindus, Mahomedans, and "other natives of the country."*

A certain number of the older English statutes and the English common law are, therefore, to a limited extent, still in force in the Presidency towns as applicable to Europeans, while much of the old Hindu and Muhammadan law is everywhere personal to their Indian fellow subjects; but, apart from these and from the customary law, which is as far as possible recognised by the courts, the law of British India is the creation of statutory enactment, made for it either at Westminster or by the authorities in India to whom the necessary law-giving functions have from time to time been delegated.

The British-Indian Statute Book.—The *lex scripta* of British India may, then, be said to consist of: first, Acts of Parliament; secondly, direct legislation in India; and thirdly, derivative legislation, consisting of statutory rules, orders and bye-laws, supplementing particular enactments. Orders by the King-in-Council in pursuance of Acts of Parliament are another species of derivative legislation; but the number of these that relate to India is small.

As regards parliamentary legislation, the application of an unrepealed statute passed before the grant of the charter of 1726 may be a matter of doubt and complexity; but an Act of Parliament passed subsequently has no application to any part of British India unless it purports to extend to it in express terms or by necessary implication.

The history of legislation in India and the procedure by which laws are now made have been dealt with in the preceding chapter. It will be gathered from what was there said that the results of direct legislation in India may be resolved under five different heads: (i) so much as is still unrepealed of the early Regulations of Bengal, Madras, and Bombay, made prior to 1834 under the quasi-legislative authority then entrusted

* "The Government of India," by Sir Courtenay Ilbert, K.C.S.I.

to the executive†; (ii) the Acts of the Governor-General in Council, which may be divided into general Acts and local Acts; (iii) Regulations issued by the executive under the statute of 1870, which take the form, and have all the effect, of legislative enactments; (iv) temporary Ordinances promulgated by the Governor-General under the Indian Councils Act of 1861; and (v) Acts of the provincial legislative councils.

A notable feature of the statute law of India is the number of examples of successful codification. The most important of the codes is the Indian Penal Code, enacted in 1860, which has remained in force up to the present time and has required little amendment or amplification. The rules of procedure have been codified in the Codes of Civil and Criminal Procedure (the Codes now in force being those of 1908 and 1898 respectively), the law of evidence in the Indian Evidence Act, 1872, and the principles of contract in the Indian Contract Act, 1872, to mention only a few examples.

Legislation in Native States.—In the Native States generally the law that runs is that locally imposed by the ruler, guided by the Government of India acting through its political officers. But in numerous circumscribed areas—particularly cantonments, residency-bazars, and railway lands—legislative functions and jurisdiction have from time to time been obtained by cession or otherwise, and for such places the Governor-General in (Executive) Council makes territorial laws, applying Acts of the British Indian legislature or framing distinct enactments, and establishing courts for the administration of justice.

Acts of Parliament.—A list of the public Acts of Parliament passed in the years 1892–1901, and republished by the Government of India as having reference, directly or indirectly, to that country, was given in the last decennial number of this Statement. The following table brings the information down to the end of 1911, omitting only the successive Army (Annual) Acts and three Expiring Laws Continuance and Statute Law Revision Acts:—

Year.	Regnal No. and Chapter.	Subject.	Year.	Regnal No. and Chapter.	Subject.
1902	2 Edw. 7. c. 36	Mail Ships.	1908	8 Edw. 7. c. 48	Post Office.
1903	3 Edw. 7. c. 11	*Contracts (India Office).		c. 51	Appellate Jurisdiction.
1904	4 Edw. 7. c. 26	*Indian Councils.		c. 54	*East India Loans.
1905	5 Edw. 7. c. 10	Shipowners' Negligence (Remedies).		c. 69	Companies (Consolidation).
	c. 14	Medical Act (1886) Amendment.	1909	9 Edw. 7. c. 4	*Indian Councils.
	c. 15	Trade Marks.		c. 18	Naval Establishments in British Possessions.
	c. 19	*East India Loans (Railways).		c. 41	Naval Discipline.
1906	6 Edw. 7. c. 5	Seamen's and Soldiers' False Characters.	1910	10 Edw. 7. c. 5	*East India Loans (Railways and Irrigation).
	c. 9	*Indian Railways Act Amendment.		10 Edw. 7. and 1 Geo. 5. c. 26.	Regency.
	c. 11	Reserve Forces.		c. 29	Accession Declaration.
	c. 15	Extradition.		c. 32	Registration of Births, Deaths, and Marriages (Scotland) Amendment.
	c. 30	Colonial Marriages (Deceased Wife's Sister).	1911	1 & 2 Geo. 5. c. 8	Merchant Shipping (Seamen's Allotment).
	c. 40	Marriage with Foreigners.		c. 13	Parliament.
	c. 48	Merchant Shipping.		c. 18	*Indian High Courts.
	c. 58	Workmen's Compensation.		c. 20	Geneva Convention.
1907	7 Edw. 7. c. 9	Territorial and Reserve Forces.		c. 25	*Government of India Act Amendment.
	c. 16	Evidence (Colonial Statutes).		c. 28	Official Secrets.
	c. 25	Commissioners for Oaths (Prize Proceedings).		c. 42	Merchant Shipping.
	c. 35	*Council of India.		c. 46	Copyright.
	c. 52	Merchant Shipping.		c. 57	Maritime Conventions.

The connexion of some of these Acts with India is remote. Those passed with sole reference to India are marked with an asterisk; the most important were the three Acts relating to the councils, which were dealt with in the last chapter, and the High Courts Act, some particulars of which are given in Chapter VI. Three

† To which might be added the rules, laws, and regulations made by the Governor-General or the Governor-General in Council for non-regulation provinces before 1861 and confirmed by the Indian Councils Act of that year. But probably most, if not all, of this latter body of laws has expired or been superseded.

of the remaining Acts were Acts empowering the Secretary of State in Council to raise money in the United Kingdom for public works and other purposes; the other three were of minor importance. The Copyright Act was brought into operation in India by proclamation on the 30th October 1912.

Acts of the Governor-General in Council.—During the period under review 125 Acts of varying degrees of importance were passed by the Governor-General in Council. The purport of the principal Acts has been given year by year in the annual numbers of this Statement, and many of them are referred to elsewhere in this decennial number. In the following list of some of the most important Acts passed during the first nine years of the decade references are given to the pages on which some account of their provisions will be found: 1903—the Indian Income-tax (Amendment) Act, (p. 218); 1904—the Indian Universities Act (p. 349), the Co-operative Credit Societies Act (p. 250); 1907—the Prevention of Seditious Meetings Act (p. 84); 1908—the Code of Civil Procedure (Act V.), a new code, replacing the code of 1882 and representing the result of consideration extending over many years, the Explosive Substances and Newspapers (Incitements to Offences) Acts (pp. 84 and 362), the Indian Criminal Law Amendment Act (pp. 74 and 85), the Indian Registration Act (p. 220), and the Indian Emigration Act (p. 372), the last two noticeable as further examples of the codifying process; 1909—the Whipping Act (p. 87); 1910—the Indian Press Act (p. 363), the Indian Paper Currency Act (p. 167), the Indian Emigration (Amendment) Act (p. 372); 1911—the Indian Patents and Designs Act (p. 284), the Indian Factories Act (p. 283).

Between the 31st March 1911 and the 1st April 1912 fourteen Acts received the assent of the Governor-General.

The Indian Christian Marriage (Amendment) Act (No. XIII. of 1911) laid down that Indian Registrars-General should send certificates of marriage direct to the India Office for preservation, instead of through the Government of India to the India Office for delivery to the Registrar-General in England.

The Court-fees (Amendment) Act (No. XIV. of 1911) made provision for the levy of a fixed fee to cover the cost of postage of records called for at the instance of parties.

The Indian Forest (Amendment) Act (No. XV. of 1911) gave local Governments power to issue certain orders and rules under the Forest Act without the previous sanction of the Government of India.

The Bengal, Agra, and Assam Civil Courts (Amendment) Act (No. XVI. of 1911) made some small changes in Act XII. of 1887. The most important increased the limit of value of suits triable by selected munsifs as "small causes" from Rs. 100 to Rs. 250.

The Indian Airships Act (*No. XVII.* of 1911) conferred upon Government power to control by means of a system of licences the manufacture, sale, import, export, use and possession of airships. The Act was passed mainly with a view to military possibilities. It empowered Government also to take over all airships, subject to payment of reasonable compensation, in times of grave public emergency.

The Calcutta Improvement (Appeals) Act (No. XVIII. of 1911) made provision for appeals to the High Court in reference to the compulsory acquisition of land for the Calcutta Improvement Trust.

The Cowasjee Jehangir Baronetcy Act (No. XIX. of 1911) settled the endowment of the baronetcy conferred on Sir Cowasjee Jehangir of Bombay.

The Indian Stamp (Amendment) Act (No. I. of 1912) raised the duty on bills of exchange for amounts not exceeding Rs. 1,000 in the same ratio as the duty on bills for higher amounts had been raised by Act VI. of 1910.

The Co-operative Societies Act (No. II. of 1912) is dealt with on page 250.

The Indian Post Office (Amendment) Act (No. III. of 1912) conferred on the postal authorities further powers of dealing with articles posted in contravention of the principal Act, and removed and remedied some obscurities and minor defects in the Act.

The Indian Lunacy Act (No. IV. of 1912) amended the law relating to the custody of lunatics in India so as to assimilate it to the modern English law (*see* page 137). The opportunity was taken also to rearrange and consolidate as far as possible the whole of the law relating to lunatics, which was previously contained in a number of separate Acts.

(Law and Legislation.)

The Provident Insurance Societies Act (*No. V. of* 1912) and *the Indian Life Assurance Companies Act* (*No. VI. of* 1912) are referred to on page 298.

The Bengal, Bihar and Orissa, and Assam Laws Act (*No. VII. of* 1912) became necessary by reason of the redistribution of territory on the 1st April 1912. Its effect was to maintain existing laws, merely providing for their administration by the new authorities.

Regulations.—The Regulations made by the Governor-General in Council under the Government of India Act of 1870 apply only to limited areas in the less developed parts of the country, and are not, generally speaking, of great individual importance. During the decade, 48 Regulations were made, nine of which came within the year 1911–12. Of the latter, the most important were the Ajmer Talukdars Loan Regulation (No. II. of 1911), providing for the grant of loans to indebted talukdars in Ajmer; the Hazara Forest Regulation (No. III. of 1911), consolidating and amending the law relating to reserved forests and waste lands in the Hazara district; and the Laccadive Islands and Minicoy Regulation (No. I. of 1912), which declared the enactments in force in the islands, and made provision for the administration of justice therein, on the lines of the existing arrangements. The islands, which had been administered by the British Government for many years, were formally ceded and included within the limits of the Madras Presidency in 1909.

Ordinances.—As has already been stated, the power of promulgating Ordinances, conferred on the Governor-General by the Indian Councils Act of 1861, has been exercised only seven times in all. One Ordinance was promulgated during the period under review—the Regulation of Meetings Ordinance, 1907. In its main provisions, the Ordinance anticipated the Prevention of Seditious Meetings Act, 1907, by which it was superseded within six months. Since the end of the decade an Ordinance—the Bengal Cotton Gambling Ordinance, 1912—has been made "to prohibit the practice of cotton gambling" in Bengal, pending the consideration by the Governor in Council of a law to effect this object.

Provincial Acts.—The range of legislation in the provincial councils is naturally more restricted, and the number of Acts passed smaller, than in the case of the Governor-General's Council. References to many of the Acts passed during the first nine years of the decade will be found elsewhere in this Statement. Among the most important were the Madras Estates Land Act, 1908 (*see* page 187), the Bombay Land Record-of-rights Act, 1903 (p. 179), the Chota Nagpur Tenancy Act, 1908 (p. 184), and the Bundelkhand Encumbered Estates and Alienation of Land Acts, 1903 (p. 185). The principal subjects dealt with by the provincial legislatures are those connected with the land, local self-government, excise, and police.

The provincial Acts of 1911–12 may be briefly noticed.

Madras.—*The Madras Equitable Assurance Society's* (*Amendment*) *Act* (*No. III. of* 1911) was a private Act introducing amendments facilitating the working of the society.

The Limited Proprietors Act (*No. IV. of* 1911) provides that persons having limited or temporary interests in estates may be registered as "proprietors" for the purposes of certain Acts.

The Madras Hackney Carriage Act (*No. V. of* 1911) amended and brought up to date the provisions of the Act of 1879, which it repealed.

Bombay.—*The Aden Port Trust* (*Amendment*) *Act* and *the City of Bombay Municipal* (*Amendment*) *Act* (*Nos. I. and II. of* 1911) made numerous amendments in points of detail.

The Dekkhan Agriculturists' Relief (*Amendment*) *Act* (*No. I. of* 1912) exempted co-operative credit societies from the disabilities imposed upon creditors of agriculturists by the Dekkhan Agriculturists' Relief Act, 1879.

Bengal.—*The Bengal Local Government Act* (*No. III. of* 1911) made provision, in view of the creation of an executive council, for the exercise of statutory functions by the Lieutenant-Governor in Council.

The Chota Nagpur Encumbered Estates (*Amendment*) *Act* (*No. IV. of* 1911) conferred certain powers necessary to secure the object of the Act amended.

The Calcutta Improvement Act (*No. V. of* 1911), "to provide for the improvement and expansion of Calcutta," was a measure of the first importance. Some account of its provisions is given on page 141.

The Calcutta Port (*Amendment*) *Act* (*No. I. of* 1912) made some unimportant changes in the law as to the powers and procedure of the Port Commissioners.

The Bengal Mining Settlements Act (*No. II. of* 1912) made provision for enforcing sanitation in the mining settlements in Bengal established as a result of the rapid development of the coal industry. It provides for the appointment of a Mines Board of Health for each mining district and of sanitary officers, and for compelling mine-owners and land-owners to carry out, or to pay for, sanitary measures considered necessary in areas brought under the Act.

United Provinces.—*The United Provinces Motor Vehicles Act* (*No. II. of* 1911) provides for the registration of motor vehicles, the licensing of drivers, and the regulation of motor traffic.

The United Provinces Arbitration (*Amendment*) *Act* (*No. I. of* 1912) made a slight amendment in the Indian Arbitration Act with a view to its application to Cawnpore and other places in the United Provinces.

The Oudh Civil Courts (*Amendment*) *Act* (*No. II. of* 1912) raised the pecuniary limits of the small cause court jurisdiction of munsifs in Oudh from Rs. 100 to Rs. 250.

Punjab.—*The Delhi Darbar Police Act* (*No. II. of* 1911) and an amending Act (*No. IV. of* 1911) made provision for police administration, and the preservation of order, in the Durbar area.

The Punjab Municipal Act (*No. III. of* 1911) is referred to on page 113.

The Punjab Courts (*Amendment*) *Act* (*No. I. of* 1912) made some changes in the law as to further appeals, revision, and court fees.

Burma.—*The Burma Municipal* (*Amendment*) *Act* (*No. II. of* 1911) dealt with various points of detail connected with municipal administration.

The Burma Military Police Amendment Act (*No. III. of* 1911) gave the new grade of deputy superintendents of police the same position under the Act as assistant superintendents.

The Burma Forest Amendment Act (*No. I. of* 1912) made some changes in the direction of decentralization and empowered the local Government to levy a duty on manufactured lac.

The Burma Towns and Villages Amendment Act (*No. II. of* 1912) dealt with various questions connected with the powers and duties of headmen and other matters.

Eastern Bengal and Assam.—*The Eastern Bengal and Assam Court of Wards* (*Amendment*) *Act* (*No. I. of* 1911) altered the law so as to admit of loans being made on mortgage from the funds of one estate under the administration of the Court of Wards to another such estate.

The Chittagong Port Commissioners (*Amendment*) *Act* (*No. I. of* 1912) made provision for the levy of a customs duty on jute exported by sea from Chittagong. The Act was a corollary to the Calcutta Improvement Act of 1911, which contained a similar provision applying to exports from Calcutta (*see* page 141).

The Jalpaiguri Labour Act (*No. II. of* 1912) was passed on the report of inquiries into the prevalence of malaria on tea-gardens in the Duars, with a view to placing Government and the proprietors and managers of tea estates in a better position to take measures to improve the health of the labourers. The Act applies in the first instance only to the Jalpaiguri district. It provides for the maintenance of a reliable record of vital occurrences on tea-gardens, and of statistical information regarding the economic condition of the labour population, prescribing the keeping of registers and submission of returns by employers, and giving a right of inspection for the purpose of verifying such registers and returns.

The Eastern Bengal and Assam Military Police Act (*No. III. of* 1912) brought together the separate laws in force in Eastern Bengal and in Assam respectively, and made some minor changes in the law.

(The Courts.)

CHAPTER VI.

LITIGATION, CRIME, AND CRIMINAL JUSTICE.

The Courts.

The High Courts.—The system of superior courts now existing may be said to have been inaugurated by the passing of the Indian High Courts Act, 1861, by which the Crown was empowered to establish High Courts of Judicature for Bengal, Madras, and Bombay, and eventually for the Province of Agra. The judges were to be appointed by the Crown, and to hold office during the pleasure of the Sovereign; in each case, at least one-third of the number were to be barristers or members of the Faculty of Advocates of Scotland and at least one-third members of the judicial branch of the Indian Civil Service, the remaining places being available for the appointment of Indian lawyers. The jurisdiction and powers of the courts were to be fixed by their letters patent, and they were to be charged with the superintendence of all subordinate courts. In pursuance of these provisions, charters were issued in 1862, and re-issued in 1865, to constitute the High Courts of Bengal, Madras, and Bombay, and in 1866 a similar charter created a High Court at Allahabad. In the case of Bengal the High Court (whose jurisdiction at present extends to Bihar and Orissa and Assam) is vested with ordinary original jurisdiction in respect of suits of every description (except small causes) within the Presidency town, and an appeal lies from a judge on the original to a bench on the appellate side. Its extraordinary original jurisdiction enables it to remove and try any suit on the file of a subordinate court, either with the consent of parties or to further the ends of justice. It is also constituted a court of appeal from all the lower civil courts. Its ordinary original criminal jurisdiction is in respect of all persons within and without Bengal and not within the limits of the jurisdiction of any other court; it is vested with extraordinary original criminal jurisdiction over all persons residing in places formerly within the reach of the *Sadr* Court; and it is a supreme court of appeal, reference, and revision. The letters patent of the High Courts of Madras and Bombay are similar in all important respects; and the High Court at Allahabad is similarly constituted, save that, there being no Presidency town, provision is not made for the exercise of ordinary original jurisdiction except as regards criminal proceedings against European British subjects.

The Indian High Courts Act, 1911.—Some important changes in the law were effected by the Indian High Courts Act, 1911. Under the Act of 1861, each High Court consisted of a Chief Justice and as many Judges, not exceeding 15, as the Crown might from time to time think fit to appoint. The Act of 1911, which was passed with the object of meeting the needs of the increasing volume of judicial business in India, raised the maximum number of Judges, including the Chief Justice, to 20. It also made provision for the establishment, if necessary, of additional High Courts in any part of India, and for the appointment of temporary additional Judges (within the prescribed maximum limit of number) by the Governor-General in Council.

Special Tribunals.—Reference should also be made here to the new procedure introduced by the Indian Criminal Law Amendment Act (No. XIV.) of 1908, "to "provide for the more speedy trial of certain offences." Under this Act persons accused of any of the specified offences may be sent for trial to the High Court and tried by a Special Bench of the Court composed of three Judges, without a jury. A number of cases have been tried under its provisions, mostly in the Calcutta High Court.

At the end of 1911–12 the numbers of Judges in the four High Courts were as follows (including in each case the Chief Justice): Calcutta 20 (including 4 temporary additional Judges appointed early in 1912), Madras 10 (including 2 temporary additional Judges), Bombay 8, Allahabad 7. Of the total number, 14 were Indians.

Chief Courts.—The establishment of the High Courts was followed by the constitution in 1866 of a Chief Court for the Punjab, framed on the same lines, but deriving its authority from the Indian legislature, and composed of a Chief Judge and Judges appointed by the Governor-General in Council, and in 1900 a similar Court was established at Rangoon for Lower Burma. Like the High Court at Allahabad, the Chief Court at Lahore does not exercise ordinary original jurisdiction save in respect of accused European British subjects; but the Burma Chief Court is constituted the

principal civil and criminal court of original jurisdiction for Rangoon, which stands very much on the footing of a Presidency town. In 1912 the Punjab Chief Court was composed of seven (including two temporary additional) Judges, and the Burma Chief Court of five.

Judicial Commissioners.—In other provinces the place of a High Court or Chief Court is taken by one or more Judicial Commissioners, who are appointed by the Government of India and exercise authority by virtue of various Indian enactments. There are Judicial Commissioners in the Central Provinces, North-West Frontier Province, Coorg, Oudh, Sind, Upper Burma, and Chota Nagpur.

Inferior Criminal Courts.—The Code of Criminal Procedure (Act V. of 1898) provides for the constitution of inferior criminal courts, styled Courts of Session and courts of magistrates.

Sessions Courts.—Every province is divided into sessions divisions, each consisting of one or more Districts. For every sessions division the Local Government must, under the Act, establish a Court of Session and appoint a Sessions Judge, and provision is also made for the appointment, if necessary, of Additional and Assistant Sessions Judges. Subject to the territorial limits of their respective jurisdictions, these stationary sessions courts, which take the place of the assizes held by a Judge of the High Court on circuit in England, are competent to try all accused persons duly committed and to inflict any punishment authorised by law; but every sentence of death is subject to confirmation by the highest court of criminal appeal in the province.

Magistrates' Courts.—Below the Sessions Courts come the courts of magistrates, who are partly members of the Indian Civil Service and partly drawn from the locally recruited, and mainly Indian, Provincial Services. The courts of magistrates are of three classes, those of the first having power to pass sentences of two years' imprisonment and to fine up to Rs. 1,000, and those of the second and third to pass sentences of six months' and one month's imprisonment respectively, and to fine up to Rs. 200 and Rs. 50. Only those of the first class are empowered, since the passing of Whipping Act, 1909, to pass sentences of whipping. The powers of magistrates are defined also by territorial limits, and with reference to the various classes of crime, a schedule to the Code setting forth, in regard to each offence, the grade of magistrate competent to try it. Magistrates of the first class, or of a lower class if specially authorised, are enabled to commit for trial by the Court of Session such offences as are not within their cognizance, or for which they are not competent to inflict adequate punishment. In the non-regulation areas, Local Governments may invest any magistrate of the first class with power to try any offence not punishable with death.

In each District one magistrate of the first class (in practice the Collector or Deputy Commissioner) is appointed District Magistrate and, as such, supervises the work of the other magistrates of the District. Provision is also made, and largely resorted to in the towns, for the appointment of honorary magistrates, for the formation of benches of magistrates, honorary or stipendiary, and for the appointment, in the Presidency towns, of Presidency magistrates, to try minor offences and commit to the High Court persons charged with more heinous crime. In Madras a considerable number of petty cases are tried by the village headmen in their capacity of village magistrates, and similar powers are exercised in varying degrees by village officers in some other provinces, as, for instance, by village police patels in Bombay and village headmen in Burma. The question of further extending this method of dealing with trivial cases has been under consideration in connection with the recommendations of the Indian Police Commission and the Decentralization Commission.

Juries and Assessors.—Trial by jury is the rule in original criminal cases before the High Courts. In the Mofussil it is not always possible to empanel an efficient jury, and trials before Courts of Session are conducted with the aid either of jurors or of assessors—who assist, but do not bind, the judge by their opinions—according as the Local Government by general orders may direct. Where trial is by jury, the law directs the Sessions Judge, if he considers that a jury has returned a manifestly wrong verdict, to submit the case to the High Court, which is empowered to set aside or modify the finding. An Indian jury consists of nine persons in trials before a High Court, and in other trials of such uneven number up to nine as may

(The Courts.)

be prescribed by the Local Government. Judgment may be given on the verdict of a majority, provided the Judge agrees with it (and, in the case of the High Courts, provided the majority includes at least six jurors). In the North-West Frontier Province and parts of the Punjab a certain number of criminal cases are, under the provisions of the Frontier Crimes Regulation, referred to Councils of Elders (Jirgahs).

Inferior Civil Courts.—The constitution and jurisdiction of the inferior civil courts in each province are determined by special Acts or Regulations. The arrangements made under these differ in nomenclature and otherwise; but they are all similar in essential respects, and it will suffice to describe the system that prevails over the widest area.

District Judges.—Throughout Bengal, the Province of Agra, and Assam, there are three classes of courts, those of District Judges, Subordinate Judges, and Munsifs. Ordinarily one District and Sessions Judge is appointed to each District, and presides, in the former capacity, in its principal civil court of original jurisdiction. His jurisdiction extends—subject to the provisions of the Code of Civil Procedure, which require every suit to be instituted in the court of the lowest grade competent to try it—to all original suits, and he is vested with administrative control over, and the distribution of business among, all the other civil courts in the District. The District and Sessions Judges are selected from the Indian Civil Service or the Provincial Civil Service.

Subordinate Judges and Munsifs.—Next to the District Judge come Subordinate Judges with co-extensive original jurisdiction; while the lowest courts are presided over by Munsifs, whose jurisdiction is ordinarily limited to suits not exceeding Rs. 1,000 in value. Subordinate Judges and Munsifs are, as a rule, natives of India, and are frequently members of the Indian bar.

Small Cause Courts.—Besides the civil courts described above, there are in the Mofussil a number of special Courts of Small Causes with jurisdiction to try, in a summary manner and subject to a limited right of appeal, simple money suits, with a limit of value which is ordinarily Rs. 500; and, where such special courts have not been constituted, jurisdiction to try as "small causes" similar suits may be conferred on selected Subordinate Judges or Munsifs. There are also Presidency Small Cause Courts, with jurisdiction to dispose of money suits up to a value of Rs. 2,000, at Calcutta, Madras, and Bombay. At Madras the experiment has been tried of still further relieving the High Court by the constitution of a City Civil Court with jurisdiction to try, *exceptis excipiendis*, all suits not exceeding Rs. 2,500 in value. In Madras, and also in the United Provinces, the leading residents of villages may be appointed to sit, singly as Munsifs or together on benches, and under a similar procedure to dispose of petty claims valued at not more than Rs. 20, or with the consent of parties Rs 200. This system has been extensively developed in Madras, where in 1911 about a quarter of the total number of suits instituted—106,311 out of 427,302—were instituted in the Village Courts. The growth in the number of suits filed before these Courts, which are able to settle petty disputes quickly and cheaply, appears to indicate that they have on the whole the confidence of the people. In the United Provinces the Village Courts deal with a much smaller number of suits and do not seem to have attained to the same degree of popularity and usefulness. Somewhat similar provisions are made in some other provinces for disposing of petty cases, as, for example, by appointing village Munsifs under the Dekkhan Agriculturists' Relief Act, or by conferring a limited civil jurisdiction on village headmen in Burma. The Punjab Panchayat Act of 1912, passed after the end of the period under review, provides for the constitution in that province of *panchayats* with power to dispose of certain classes of cases with a maximum limit of value of Rs. 200.

Civil suits are, in India, never tried by jury.

Appeal and Revision.—The system of Indian law allows considerable latitude in the matter of appeal. From a conviction by a second or third class magistrate an appeal lies to the District Magistrate or to any specially-empowered first-class magistrate; and, subject to certain limitations, original convictions by magistrates of the first-class are appealable to the Sessions Judge, whose own original convictions are in turn appealable to the highest court in the province. The latter court is empowered to call for and examine the record of any proceeding before any subordinate court for the purpose of satisfying itself as to the correctness, legality, propriety, or

regularity of any finding, sentence, or order. A finding of acquittal is ordinarily final, but may be appealed against under the special orders of the Local Government or revised by the chief court of the province. This procedure is adopted only in a small number of cases, where there appears to be some manifest failure of justice. As regards appeals in civil cases, there is much the same latitude. Outside Small Cause Court jurisdiction, an appeal lies from every decision of a Munsif to the District Judge, but the latter is enabled to transfer such appeals to Subordinate Judges for disposal. Similarly every decree or order made by a Subordinate Judge is appealable to the District Judge or to the High Court. The decisions of a District Judge are liable to be taken on appeal to the High Court, and second or special appeals to the High Court are allowed in some circumstances.

In certain cases, a further appeal lies to the Judicial Committee of the Privy Council.

Revenue Courts.—Side by side with the civil courts there exist revenue courts, presided over by officers charged with the duty of settling and collecting the land revenue. The relations of the two classes of courts have in the past given rise to difficult questions. On the whole it may be said that, so far as the assessment and collection of land revenue are concerned, and in purely fiscal matters, the civil courts are now generally excluded from interfering. On the other hand, all questions of title to land have been brought within their cognizance; rent suits, which were long triable by revenue officers alone, are in some parts of India, notably in Bengal, now relegated for disposal to the ordinary courts; and, when such suits are still dealt with by revenue officers, the procedure is assimilated to that of the civil court, and recourse may be had to the latter on questions of title.

Separation of Judicial and Executive Functions.—Something may conveniently be said here on the much-discussed question of the separation of executive and judicial functions. It is to be pointed out, in the first place, that the question is not now, to any extent, one of separating executive from civil judicial functions. The scheme of separation which was brought into effect in the Central Provinces in 1901 was carried further during the earlier years of the decade, and similar measures were taken in Lower Burma, where separate judicial services were constituted in 1905. The practice of entrusting executive officers with regular civil jurisdiction, which was formerly found convenient in non-regulation districts, now survives only in Upper Burma and in a few backward tracts. Elsewhere all civil suits are tried by special judicial officers, who have no direct concern with the executive administration or the police work of the country. The same may be said of important criminal trials; the superior criminal courts—the High Courts, Chief Courts, and Courts of Session—are presided over by judicial officers who have no executive authority. But minor criminal cases are still tried in all provinces by officers who exercise executive and revenue functions. As has already been explained, the Collector or Deputy Commissioner, who is responsible for the police, revenue, and executive business of his district, is also District Magistrate and, as such, is vested with extensive judicial authority and controls all subordinate magistrates within his jurisdiction. Other magistrates of the first class, also, are almost invariably Assistant or Deputy Collectors. The Collector himself, it may however be added, has but little time to devote to criminal cases, and seldom, if ever, interferes with them. The question of carrying further the separation of executive and judicial functions has received much consideration in recent years. In Bengal some steps tending in this direction have been taken, in the course of the natural process of administrative development, by the appointment of additional district magistrates to relieve the pressure on district officers, and by an increase in the number of outlying judicial centres in the mofussil. The very heavy expenditure that would be involved in the complete separation of the two classes of functions is necessarily an important factor in the case.

Statistics of Civil Justice.

Numbers of Suits instituted.—The following table shows the total numbers of civil suits instituted in the Civil Courts, under the various heads, in different years during the period under review, and the distribution by provinces (omitting the smaller provinces) in 1911:—

(Statistics of Civil Justice.)

Year.	Suits under the Rent Law.						Title and other Suits.					Grand Total.
	Suits for Money or Moveable Property.	Arrears of Rent with or without Ejectment.	Enhancement or Abatement of Rent.	For Ejectment or Recovery of Possession alone.	All other Suits under the Rent Law.	Total.	Suits for Immoveable Property.	Suits for Specific Relief.	Mortgage Suits.	Other Suits not falling under any of the preceding Heads.	Total.	
1901	1,209,654	282,683	691	1,123	5,235	289,732	91,967	20,858	108,370	28,726	249,921	1,754,722*
1902	1,189,325	317,207	513	1,133	1,004	319,947	102,239	20,240	107,373	31,326	261,178	1,775,231*
1903	1,177,672	334,127	547	1,136	575	336,385	91,215	19,121	104,634	35,518	250,488	1,767,995*
1904	1,208,505	352,735	704	1,428	632	355,499	95,462	19,396	105,819	32,824	253,501	1,817,505
1905	1,186,223	357,660	690	1,458	4,182	363,990	95,527	19,340	105,850	33,550	254,267	1,804,480
1806	1,243,596	357,198	1,076	1,473	3,570	363,297	106,450	21,488	108,678	36,697	273,313	1,880,206
1907	1,253,034	335,135	839	1,647	4,134	341,755	109,635	23,418	103,067	36,186	273,206	1,867,995
1908	1,286,837	349,043	728	1,785	396	351,952	112,136	23,428	101,298	39,377	276,239	1,915,028
1909	1,358,105	347,214	934	2,096	2,146	352 390	119,726	22,653	107,892	40,242	290,513	2,001,008
1910	1,377,428	391,541	807	1,894	2,315	396,557	120,995	21,798	177,183	41,446	361,422	2,135,407
1911	1,366,494	412,809	866	1,892	274	415,841	114,729	21,027	91,372	33,944	261,072	2,043,407
Details for 1911 :												
Bengal	183,885	229,684	432	403	173	230,692	23,468	2,461	19,412	5,310	50,651	465,228
Eastern Bengal and Assam	216,646	172,610	299	1,159	84	174.152	19,620	4,835	13,427	3,194	41,076	431,874
United Provinces	149,440	—	—	—	—	—	13,606	3,139	11,613	4,658	33,016	182,456
Punjab	152,074	—	—	—	—	—	13,854	2,817	4,334	9,103	30,108	182,182
N.W. Frontier Province	18,367	—	—	—	—	—	2,470	438	772	1,880	5,560	23,927
Central Provinces and Berar	89,125	10,188	—	326	7	10,521	8,268	1,125	5,520	457	15,370	115,016
Burma	63,551	—	—	—	—	—	1,861	580	2,586	960	6,787	70,338
Madras	379,342	1	—	—	—	1	21,047	4 353	21,795	764	47,959	427,302
Bombay	100,640	—	—	—	—	—	10,198	1,263	11,765	6,565	29,791	130,431

* Details not given for 5,415 Bombay suits in 1901, 4,781 in 1902, and 3,450 in 1903.

These figures are not comparable with those given in the last decennial number of this Statement, which included a large number of suits instituted in the Revenue Courts (mostly in the United Provinces); these are no longer shown in the collected statistics. The variation in the total number of suits instituted is shown by provinces below :—

	Bengal.	Eastern Bengal and Assam.*	United Provinces.	Punjab.	North-West Frontier Province.	Central Provinces and Berar.	Burma.	Bombay.	Madras.
1901	639,325	28,870	138,362	232,244	19,514	106,495	58,143	178,578	337,243
1902	678,170	30,282	134,656	219,599	18,800	107,175	64,618	174,885	322,903
1903	704,884	30,033	137,389	214,622	19,334	96,471	68,656	171,691	311,134
1904	746,690	31,706	143,789	210,164	21,085	98,284	72,424	153,805	326,774
1905	439,075	358,646	144,495	156,366	20,817	95,452	82,971	142,207	351,786
1906	451,414	363,219	170,296	167,361	22,294	90,782	88,402	132,478	381,342
1907	427,226	364,065	171,083	168,551	22,573	91,963	82,176	125,560	401,074
1908	419,352	388,777	174,249	189,160	23,435	102,129	78,015	133,037	391,871
1909	429,458	385,957	195,501	210,914	25,589	124,136	71,442	142,354	401,555
1910	456,409	431,074	222,165	190,268	24,336	135,209	70,283	169,007	423,111
1911	465,228	431,874	182,456	182,182	23,927	115,016	70,338	130,431	427,302

* Assam alone to 1904.

The total figures for 1911 were higher by about 16½ per cent. than those for 1901; during the same period the population increased by 5½ per cent. The year to year fluctuations show no very marked features; the one very noticeable sudden change, in the number of mortgage suits in 1910, was due to the fact that the period of two years allowed for the institution of certain suits under the Indian Limitation Act of 1908 expired in that year. It is satisfactory (except for the fact that the prevalence of plague has been alleged to be one of the main causes at work) to note that in the Punjab, where the proportion of suits to population was formerly highest, the falling off in the volume of litigation that began in the preceding decade was maintained. The sudden drop in 1905 and the subsequent gradual rise to 1909 were attributed to a special disturbing cause, the Punjab Loans Limitation Act of 1904. In Bombay also the volume of litigation showed a decided diminution during the decade. There was a rather marked increase in the number of suits in the United

Provinces, Madras, and the North-West Frontier Province. In the case of the last-mentioned province the growing volume of petty litigation was a source of some concern to the Local Government, who commented on the way in which the opportunities given by the civil law for a cheap gamble, with rich rewards for successful perjury, had tended to discredit the private settlement of cases by the local customary tribunals.

SUITS INSTITUTED PER 10,000 OF POPULATION.

—	1901.	1911.
Bengal - - - - -	50	45
Eastern Bengal and Assam -	45*	77
United Provinces - - -	30	40
Punjab - - - - -	114	91
North-West Frontier Province	95	109
Central Provinces and Berar -	84	82
Burma - - - - -	63	69
Madras - - - -	88	103
Bombay - - - -	96	66
Total, British India - -	64	67

* Assam alone.

Leaving out of account suits under the rent law, which, as the table above shows, greatly swell the total in Bengal and Eastern Bengal and Assam, and also contribute materially in the Central Provinces, but do not figure in the returns from other provinces, the marginal table shows the number of suits instituted per 10,000 of population in 1901 and 1911 respectively.

Subjects of Litigation.—The first table given above indicates in a general way the main subjects of litigation, and little more need be said. Suits for money or moveable property make up two-thirds of the total, or a greater proportion if rent suits are left out of account. The bulk of the remaining suits are suits for immoveable property or mortgage suits. Of the classes of suits not separately shown in the table, matrimonial suits in 1911 numbered 5,588, testamentary suits 849, and suits relating to religious and other endowments 155.

Value of Suits.—The average value of suits, the value of which can be estimated in money, shows a tendency to increase, but of the total number of suits considerably more than a half are still of a value of not more than Rs. 50 (£3⅓), and a substantial proportion—about one-seventh in 1911—are of a value not exceeding Rs. 10. The number of suits of a value exceeding Rs. 10,000 (£667) in 1911 was 2,550. The Courts of Small Causes, which were established with a special view to providing a cheap and speedy means of recovering small debts, in 1911 accounted for 269,154 suits.

Disposal of Suits.—Only about a quarter of the suits are contested. The marginal table shows how suits were disposed of in 1911. Thus 83 per cent. of the total number of suits disposed of during the year came to trial, and the results indicate that the proportion of unjustified litigation is not high. The decision went entirely in favour of the defendant in only 6 per cent. of cases, while the plaintiff got a decree either in whole or part, or a compromise, in 77 per cent. of cases. The results in provinces for 1911 are shown below :—

—	Number.	Percentage.
Without trial - -	327,422	16·4
Without contest -	1,171,823	58·6
Arbitration - -	8,665	·4
With contest - -	493,394	24·6

Administrations.	Number of Suits before the Courts.	Number of Suits disposed of, excluding Transfers.					Pending at Close of Year.
		Without Trial.	Without Contest.	With Contest.		On Reference to Arbitration.	
				Judgment for Plaintiff.	Judgment for Defendant.		
Bengal - - - - -	597,442	74,787	312,416	61,092	14,603	1,382	133,162
Eastern Bengal and Assam -	538,696	74,398	274,674	69,502	12,071	303	107,649
United Provinces* - - -	229,278	33,677	106,988	41,901	16,221	1,691	28,796
Punjab - - - - -	218,691	39,765	98,318	39,366	12,591	2,086	26,550
North-West Frontier Province	28,413	4,740	9,305	7,572	3,873	739	2,184
Burma - - - - -	79,767	16,096	36,026	13,132	6,103	56	8,354
Central Provinces and Berar -	165,553	24,332	69,666	25,563	7,749	59	38,184
Ajmer-Merwara - - -	10,235	2,446	5,066	841	220	85	1,572
Coorg - - - - -	2,944	217	1,697	552	72	2	404
Madras* - - - -	393,856	37,438	186,044	71,701	29,229	425	69,019
Bombay - - - -	203,951	18,487	69,628	48,041	10,650	1,745	55,387
British Baluchistan - -	4,170	1,039	1,995	594	155	92	280
Total - - -	2,472,996	327,422	1,171,823	379,857	113,537	8,665	471,541

* Excluding suits dealt with by village courts.

(Statistics of Civil Justice.)

The total number of suits pending at the close of the year, after remaining steady at about 275,000 from 1901 to 1905, in subsequent years rose considerably, as the figures in the margin show, but fell somewhat in 1911. The number of suits pending for more than three months rose from 106,428 at the end of 1905 to 225,510 at the end of 1911. In this case also there was a slight fall in 1911. The increase in the number of pending suits was common to all the larger provinces, except Burma, being most marked in Bengal.

	Suits pending at End of Year.
1905	274,689
1906	296,605
1907	316,370
1908	339,282
1909	368,882
1910	485,741
1911	471,541

The average duration of suits varies much from year to year and from province to province. The table shows the average duration of contested suits in 1911. Uncontested suits, on an average, last for, roughly speaking, about half as long. The figures for Bombay were in 1911 much higher than in previous years, the average duration of contested suits in 1910 having been 177 days. The greatest delay occurred in the Superior Courts, where uncontested suits lasted on an average for 898 days. Non-service of notices, and the rule allowing a party a year within which to apply for fresh notice, were reported to be the chief causes of delay.

	Days.
Bengal	249
Eastern Bengal and Assam	182
Agra	88
Oudh	71
Punjab	45
N.W. Frontier Province	33
Bombay	419
Central Provinces and Berar	198
Madras	257
Upper Burma	61
Lower Burma	87

Appeals.—The figures as to appeals call for little comment. The number of appeals, like the number of suits, showed a general upward tendency, which became more marked in the last two or three years of the decade. The figures for 1901, 1906, and 1911 respectively, for appeals from decrees taken as a whole, were as follows:—

	Total Number of Appeals before the Courts.	Percentage on Total Number of Suits before the Courts.	Percentage of Appeals disposed of					Pending at End of Year.
			Dismissed or not prosecuted.	Confirmed.	Modified.	Reversed.	Remanded to Lower Courts.	
1901	123,612	6·2	6·2	59·2	11·2	17·5	5·9	47,056
1906	125,381	6·0	6·7	59·9	10·2	16·9	6·2	42,567
1911	146,363	5·9	5·6	59·5	11·6	16·8	6·4	64,442

The position in regard to appeals in the provinces taken separately at the beginning and end of the decade is shown below:—

	Total Number of Appeals from Decrees before the Courts.				Percentage of Appeals dealt with during the Year* in which Decrees were			
	Actual Number.		Percentage on Suits before the Courts.		Confirmed (including Appeals Dismissed or not Prosecuted).		Modified or Reversed.	
		1911.	1901.	1911.	1901.	1911.	1901.	1911.
Bengal	41,287	29,110	5·3	4·9	69·2	63·8	25·7	29·1
Eastern Bengal and Assam†	2,166	21,948	6·1	4·1	68·3	68·7	27·7	25·1
United Provinces	22,415	18,214	14·2	7·9	64·6	67·0	29·2	28·5
Punjab	17,127	19,193	6·2	8·8	62·1	63·8	30·1	29·0
N.W. Frontier Province	2,113	1,919	9·1	6·7	70·4	68·8	23·0	25·3
Central Provinces and Berar	6,104	8,321	4·8	5·0	58·5	59·5	33·6	30·1
Burma	5,012	6,778	8·0	8·4	61·6	65·2	36·8	31·4
Madras	19,518	29,135	6·6	7·4	65·3	61·2	28·8	32·1
Bombay	8,099	11,297	3·7	5·0	69·2	76·1	26·7	19·7

* Excluding appeals transferred to courts in other provinces. † Assam alone in 1901.

The remaining proportion of appeals dealt with represents in each case the appeals remanded to lower courts.

The percentage figures show that the proportions of decrees confirmed and reversed on appeal continue, with very little variation, about the same as they have been for many years past. As regards the actual figures, the increase in the total number of appeals, and in the pending list, has been most marked in the last few years in Madras, Bengal, and Eastern Bengal and Assam. The duration of regular appeals from decrees is generally greater than that of original civil suits. The average number of days varied in 1911 between 38 in the Punjab and 376 in Madras.

Crime and Criminal Justice.

Number and Nature of Offences.—Of the total number of cases brought to trial before the criminal courts in India, more than a half arise out of offences under special and local laws, many of which are of a relatively trivial nature. The table below shows the total number of "true cases," as given in the reports on the administration of criminal justice, under the main heads year by year; these figures, which represent the numbers of offences reported, less the cases struck off as false and the complaints dismissed as showing no sufficient ground for proceeding, may be taken to indicate approximately the variations in the actual amount of crime.

—	1901.	1903.	1905.	1907.	1908.	1909.	1910.	1911.
Offences under the Indian Penal Code.								
Various offences against public tranquillity, public justice, public health, coinage, &c.	57,656	58,268	54,170	55,760	56,697	62,038	61,082	61,229
Affecting the human body :								
Affecting life	6,125	5,747	6,079	6,140	6,388	6,692	6,884	6,831
Hurt	116,344	124,535	131,453	138,836	132,917	140,750	146,788	154,844
Criminal force and assault	79,070	76,368	76,315	75,999	72,338	75,031	73,612	76,447
Others	9,931	10,188	10,527	10,600	11,178	10,656	10,998	10,984
Affecting property :								
Theft	98,474	86,587	92,667	94,373	106,798*	91,719	85,900	88.829
Robbery and dacoity	4,532	3,711	3,793	3,829	4,558	4,192	3,638	3,825
Criminal trespass	84,375	79,066	78,553	75,953	84,947	77,305	71,311	76,145
Others	56,921	57,051	57,103	60,510	63,406	63,267	60,596	63.006
Relating to marriage	11,518	12,557	13,798	14,623	14,069	14,738	15,868	16,927
Intimidation, insult, and annoyance	22,359	25,949	26,224	28,670	28,892	29,890	27,381	27,998
Other offences	3,980	4,157	4,181	4,137	4,060	4,340	4,429	4,628
Offences under special and local laws	570,246	559,867	581,924	578,393	563,124	577,945	601,184	628,590
Total true cases	1,121,531	1,102,504	1,136,797	1,147,823	1,149,372	1,158,563	1,169,671	1,220,283

NOTE.—There are small discrepancies between the totals and the detailed figures in 1903 and 1905.

The same figures, distributed by provinces, are shown below :—

—	1901.	1903.	1905.	1907.	1908.	1909.	1910.	1911.
Bengal	240,220	240,305	191,952	195,162	203,606	217,579	210,976	226,944
Eastern Bengal and Assam*	19,851	19,138	72,654	82,678	82,736	81,661	80,215	86,245
United Provinces	133,445	123,163	126,038	131,011	129,242	129,248	142,361	152,676
Punjab	110,514	120,371	127,715	121,946	124,921	122,595	127,516	138,201
North-West Frontier Province	15,700	13,255	12,861	14,004	15,352	15,524	17,842	18,063
Central Provinces and Berar	41,191	34,295	34,374	31,827	32,741	31,462	29,065	29,097
Burma	67,233	73,116	81,654	82,442	81,983	80,093	81,459	85,058
Madras	329,107	321,804	332,281	329,637	322,391	323,455	320,011	317,569
Bombay	153,016	148,445	145,249	148,146	146,163	146,955	148,438*	152,153
Total, British India	1,121,531	1,102,504	1,136,797	1,147,823	1,149,372	1,158,563	1,169,671	1,220,283

* Assam only up to 1905.

These figures show no very marked fluctuations, and such variations as there are call for little comment. The total number of "true cases" increased steadily from 1903 onwards, but the increase between 1901 and 1911—8·8 per cent.—was not much greater than the increase in population, which was 5½ per cent., and the figures, taken as a whole, were considerably lower than those for the preceding decade. The number of "offences reported" in 1911 was 1,502,972. The proportion of "true cases" to "offences reported" varies greatly in different provinces. In 1911 the total "true cases" were 81 per cent. of the "offences reported"; the provincial percentages varied from 95 in Madras and 93 in Bombay to 67 in the Punjab and 65 in Eastern Bengal and Assam. The number of cases brought to trial is less again, the total in 1911 being 1,121,275.

(Crime and Criminal Justice.)

In the Central Provinces there was during the decade a diminution in the number of cases of theft, and also in offences under special and local laws. The increase in the United Provinces in the closing years of the decade was, for the most part, in petty offences; the police reports showed a considerable increase in serious crime, particularly dacoity, in 1907 and 1908, as a result of agricultural distress, and a marked fall in subsequent years, though there was some increase again in 1911. There was in the Punjab and North-West Frontier Province, on the other hand, a marked increase in serious crime, and particularly in violent crime, in the latter years of the decade. In Burma also the increase of crime in 1911 was most noticeable in regard to the more serious offences.

Finally, the proportions in which the various classes of offences contributed to the totals in the larger provinces in 1911 may be shown :—

—	Bengal.*	Eastern Bengal and Assam.*	United Provinces.	Punjab.	North-West Frontier Province.	Central Provinces and Berar.	Burma.	Madras.	Bombay.
Offences under the Indian Penal Code.									
Various offences against public tranquillity, public justice, public health, coinage, &c.	17,535	7,636	7,766	4,015	627	1,128	3,713	15,220	4,126
Affecting the human body :									
Affecting life	693	618	1,556	954	447	432	522	903	545
Hurt	12,504	10,467	38,689	33,593	2,572	7,037	7,946	22,019	20,130
Criminal force and assault	16,572	11,208	5,981	5,336	640	3,481	2,163	24,469	6,282
Others	1,445	2,004	1,540	2,079	210	303	531	2,154	939
Affecting property :									
Theft	20,505	12,267	10,454	9,339	959	2,433	9,692	13,697	9,839
Robbery and dacoity	302	232	635	467	168	89	515	1,035	392
Criminal trespass	17,222	15,926	11,854	13,631	1,634	2,131	4,283	7,305	2,884
Others	9,552	9,753	10,437	10,967	1,268	1,348	2,952	10,434	6,793
Relating to marriage	1,600	1,654	3,863	5,706	406	596	543	1,279	1,245
Intimidation, insult, and annoyance	1,630	541	728	3,292	358	367	3,046	11,190	6,375
Other offences	562	340	617	685	72	606	401	808	416
Offences under special and local laws	126,725	19,667	58,606	48,137	8,702	9,146	48,751	207,056	92,187
Total true cases	226,847	92,313	152,676	138,201	18,063	29,097	85,058	317,569	152,153

* The figures differ from those given above, owing to the inclusion of cases found to be true of offences reported in the previous year, and the exclusion of figures relating to the scheduled districts of Angul and Sonthal Parganas, in Bengal, and the hill districts of Eastern Bengal and Assam.

The total figures so far given include in most cases offences differing very widely in gravity. It is impossible in this Statement to subject the statistics of crime to the detailed analysis that would be required to bring out clearly the amount of serious crime, as distinguished from petty offences, but one further table may be given to show in greater detail the number of "true cases" of three of the gravest crimes—murder, robbery, and dacoity.

—	Number of True Cases of—								
	Murder.			Robbery.			Dacoity.		
	1901.	1906.	1911.	1901.	1906.	1911.	1901.	1906.	1911.
Bengal	418	242	240	247	158	132	315	231	167
Eastern Bengal and Assam	44†	215	208	9†	71	84	13†	105	144
United Provinces*	472	557	582	779	779	945	350	421	554
Punjab	410	389	442	327	415	358	98	80	109
N.W. Frontier Province*	214	184	357	154	35	67	82	28	102
Central Provinces and Berar*	150†	171	236	240†	314	224	56†	46	63
Burma*	259	337	461	240	306	551	50	101	161
Madras*	463	514	526	737	644	771	585	456	417
Bombay*	445	275	341	644	418	470	1,305	216	112
Total of above figures	2,875	2,884	3,393	3,377	3,140	3,602	2,854	1,684	1,829

* The criminal justice administration reports for these provinces do not give the required figures separately. The figures here quoted are taken from the police reports, which calculate "true cases" on a different basis. Owing to changes in the form of the returns the figures for 1901 are not strictly comparable with those for the later years in these cases.

† Central Provinces and Assam only.

The number of cases of dacoity in the United Provinces rose to 854 in 1908, a famine year, and after falling greatly rose again in 1911. It is reported that the majority of the dacoities and robberies in the province are the work of criminal tribes, whom it is hoped in the near future to bring under closer control. The record of the North-West Frontier Province in respect of violent crime has always been bad, and the number of murders is much higher, in proportion to the population, than in any other province. Down to 1906 there was a welcome diminution in the volume of serious crime, but a grave increase has since been recorded. The high figure for murders shown in the statistics for 1911 was, however, a result of the policy by which absconders were invited to return to the province to have their cases disposed of. The number of murders actually committed during the year was 219, as against 259 in 1910. The number of dacoities in Bombay in 1901 was abnormal, owing to the prevalence of famine conditions, but it is not clear that the figure quoted from the police report for 1901 is comparable with those for the later years. The criminal justice administration reports, the figures in which are for dacoity and robbery together, show a less marked decline in "true cases," from 677 in 1901 to 487 in 1906 and 392 in 1911. There was in 1911 a marked increase in the graver forms of crime in the Punjab, especially in the north-western portions of the province, and also in Lower Burma.

"Political" Crime.—Some reference must be made to one other class of offences. The second half of the period under review was marked by a serious increase in the number of offences of a seditious nature, and by the occurrence of violent crimes originating more or less directly out of political agitation. Taking first what may be said to constitute "political" crime in the stricter sense, the offences classed in the Indian Penal Code as "offences against the State," the number of "true cases," which averaged for the first four years of the decade about seven a year and for the next two years 17, rose suddenly in 1908 to 50, and averaged for the three years 1908–10 about 52. The number of persons convicted rose from 16 in 1902 to 96 in 1910. In 1911 there were 55 "true cases," and 84 convictions. The figures for 1911 include 42 cases and 24 convictions in Upper Burma, arising out of the abortive Myinmu rebellion of the previous year. Most of the other cases included in the above totals were prosecutions for seditious writings or speeches: detailed information as to these, from the beginning of 1907 onwards, has been given in returns laid before Parliament.* Cases were most numerous in the two Bengals, the Punjab, and Bombay. The parliamentary returns referred to also included information as to cases in which proceedings were taken against persons disseminating seditious matter with a view to their being called upon to give security for good behaviour; the number of cases during the period covered by the returns was 61. Of the other offences coming within the same chapter of the Indian Penal Code, the most important are those in the nature of rebellion and conspiracy against the State. Conspiracies of this kind have been brought before the criminal courts in the two Bengals, Bombay, and Madras. In the Alipore case, which arose out of the discovery of a large quantity of explosives and arms in a garden at Maniktola in 1908, 36 persons were brought to trial and 14 were finally convicted. Among subsequent cases may be mentioned that known as the Dacca conspiracy case, in which also 14 persons were finally convicted, and the Nasik case, brought to light after the murder of Mr. Jackson, in which 27 persons were convicted. In 1911–12 14 persons were brought to trial, and nine convicted, in Madras, in connection with a conspiracy discovered in the course of the investigations following the murder of Mr. Ashe.

The other crimes that go to make up the total of "political crime," in the wider sense in which that term is often used, are not distinguishable in the statistical returns; but there has been in recent years a certain amount of violent crime the direct connection of which with political agitation has been beyond doubt. The beginning of the very serious outbreak of "political" crime in Bengal in 1908 was marked by an attempt in December 1907 to wreck the Lieutenant-Governor's train by means of explosives. There followed in the spring of 1908 other outrages in which bombs were used, among them an abortive attempt on the life of the Mayor of Chandernagore, and the murder of two ladies at Muzaffarpur by a bomb intended for the District Judge. In the same year it was reported both from Bengal and from Eastern Bengal and Assam that dacoities were being committed by youths of the respectable classes, members of revolutionary organisations, with the object apparently

* Parliamentary Papers 50 of 1909 and 50 of 1911.

of obtaining funds for their campaign; and serious riots were caused in Madras by the preaching of certain agitators, who were prosecuted and convicted for sedition. It is unnecessary to follow in detail the subsequent history of these forms of "political" crime. In Bengal particularly there have been a number of murderous attacks on individuals. During the protracted proceedings in the Alipore case, the Public Prosecutor and two police officers were murdered, in addition to an approver.

It is only necessary to mention again the names of Mr. Jackson, Collector of Nasik, and Mr. Ashe, Collector of Tinnevelly, and to recall those of Sir Curzon Wyllie and Dr. Lalkaka, to show that outrages of this description have not, unhappily, been confined to any limited area.

The occurrence of four cases of assassination and an increase in the number of dacoities in which members of the respectable classes were concerned were regrettable features of the year 1911 in Eastern Bengal. The question of taking special measures to deal with dacoities of the class referred to engaged the attention of the Governments of Eastern Bengal and Assam and of Bengal.

Reference may be made here to some of the special measures taken, from 1907 onwards, to check sedition and political crime.

In view of the prevalence of political unrest in the Punjab, it was found necessary in May 1907 to deport two persons from that province to Burma, under the Bengal State Prisoners Regulation (No. III.) of 1818. By the autumn the feeling of unrest had abated considerably in the Punjab, and the deported agitators were released in November.

Meanwhile legislation was undertaken to deal with a method of disseminating sedition specially dangerous among illiterate people—agitation by seditious speeches at public meetings, one obstacle to the suppression of which was the difficulty of obtaining evidence of speeches delivered in the vernacular.

The Prevention of Seditious Meetings Acts.—Public meetings which in this way promoted sedition and led to disturbances of the public tranquillity were prevalent both in the Punjab and Eastern Bengal and Assam, and an Ordinance (No. I. of 1907) was accordingly promulgated in May 1907 with the object of regulating the holding of meetings in those provinces. The effect of the Ordinance was that, in "proclaimed areas" notified under the Ordinance, notice must be given to the police of the intention to hold a public meeting for the discussion of public or political matters, police officers or others might be deputed to such meetings to take a report of the proceedings, and any meeting likely to promote sedition or cause a disturbance of the public tranquillity might be prohibited by the District Magistrate. The Ordinance was superseded in November 1907 by the Prevention of Seditious Meetings Act, the provisions of which were substantially identical with those of the Ordinance. Power was taken to bring the provisions of the Act into operation in any part of British India as occasion might require. They were actually brought into active operation in 1907 in one district in Eastern Bengal and Assam, and in 1910 in three districts in that province and one district in the Punjab. The application of the Act itself was extended to most provinces in 1910, but in provinces other than those just mentioned no areas were "proclaimed." The Act, which, as passed, had force for three years only, was continued for a further period, up to the 31st March 1911, by the Continuing Act, 1910. It was repealed in March 1911 by the Prevention of Seditious Meetings Act, 1911, which consolidated and amended the law. The amendments introduced were few. Among other things, the new Act makes the previous sanction of the Government of India necessary for the notification of proclaimed areas by local Governments, and requires notice to be given only in the case of meetings for the discussion or consideration of subjects likely to cause disturbance or public excitement, and not also, as the Act of 1907 did, in the case of meetings for the discussion of "any political subject." The Act extends to the whole of British India, but does not come into operation in any part of the country unless and until a notification to this effect is published by the Government of India.

The Explosive Substances Act (No. VI.) of 1908 was the first of three special Acts passed in that year. Recent events had brought prominently to notice the inadequacy of the existing law to deal with crimes committed by means of explosive substances. The Act followed the lines of the English Explosive Substances Act of 1883.

The Newspapers (Incitements to Offences) Act (No. VII.) of 1908, which was passed on the same day, is referred to elsewhere.*

The Indian Criminal Law Amendment Act (No. XIV.) of 1908 had the double object of providing for the more speedy trial of certain offences and for the prohibition of associations dangerous to the public peace. Reference was made at the beginning of this chapter to some of the provisions of the Act under the former head; special procedure is laid down for the magisterial inquiry, as well as for trial. The scheduled offences to which the special procedure made available by the Act may be applied include criminal conspiracy against the State, attempts to seduce soldiers or sailors from their duty, offences under the Explosive Substances Act, murder, and other heinous crimes. The second part of the Act declares all associations to be unlawful which encourage or aid persons to commit acts of violence or intimidation, or of which the members habitually commit such acts, and further empowers the Government of India to declare any association unlawful that interferes with the administration of the law or with the maintenance of law and order, or constitutes a danger to the public peace. Penalties are prescribed for belonging to, contributing to, or managing an unlawful association. The Act applied, in the first instance, only to Bengal and Eastern Bengal and Assam. It was subsequently extended to the other provinces (except Burma). A number of associations were declared unlawful in Bengal.

The Act last mentioned was passed in December 1908. In the same month it was decided to take action in Bengal and Eastern Bengal and Assam under Regulation III. of 1818, referred to above. Nine persons in all were arrested. They were released in February 1910.

The Indian Press Act, 1910, is dealt with in detail in Chapter XXII.*

Proportion of Cases to Population.—Still taking the number of "true cases" as the standard of comparison, the table in the margin shows how the different provinces compared, as regards the relative prevalence of crime, at the beginning and end of the decade. It must be remarked again that the total figures which alone can be dealt with here include offences of every degree of seriousness, and that the figures of "true cases" can only be taken as a rough indication of the actual amount of crime; in comparing the figures for different provinces it is to be borne in mind, also, that they bear very different proportions, not only, as has already been mentioned, to the numbers of offences reported, but also to the numbers of persons convicted. Thus, convictions are, in Burma, rather more numerous than "true cases," and in the North-West Frontier Province almost as numerous; in most other provinces the proportion approximates to three-quarters, but in Eastern Bengal and Assam and the Punjab, where it was seen that the proportion of cases returned as true was lowest, the proportion of persons convicted is also lower than elsewhere, being in

	Number of "True Cases" per 10,000 of Population.			
	1901.		1911.	
	Offences under the Indian Penal Code.	Offences under Special and Local Laws.	Offences under the Indian Penal Code.	Offences under Special and Local Laws.
Bengal	20	13	20	25
Eastern Bengal and Assam	28*	12*	22	6
United Provinces	17	10	19	12
Punjab	39	16	45	24
North-West Frontier Province	40	37	43	40
Central Provinces and Berar	17	15	14	7
Burma	35	37	36	48
Madras	28	58	27	50
Bombay	31	52	31	47
Total, British India	24	24	24	26

* Assam only.

* Page 362.

the first case a little more, and in the second a little less, than a half of the number of "true cases." The notoriously litigious proclivities of the Punjab peasant give that province a prominent place in the returns of criminal as in those of civil justice; many of the cases dealt with by the criminal courts are of a trifling or frivolous nature, petty disputes being frequently carried into the courts under cover of a criminal charge.

Disposal of Cases.—The following table (also compiled from the criminal justice administration reports) shows the number of persons under trial during 1911, and the manner in which they were disposed of. The number of persons involved, it may be noted, averages about five for every three cases:—

—	Number of Persons under Trial.	Discharged or Acquitted.	Convicted.		Committed or referred to other Tribunals.	Died, escaped, or transferred to other Provinces.	Remaining under Trial at the End of the Year.	Average Number of Days during which each Case lasted.
			On Regular Trial.	On Summary Trial.				
Bengal	270,113	83,844	62,398	113,596	2,530	137	7,605	7
Eastern Bengal and Assam	111,129	57,240	33,616	11,133	2,088	113	7,064	12
United Provinces	273,593	155,203	79,274	28,014	5,066	294	5,742	10
Punjab	283,214	198,067	60,223	8,506	1,619	274	14,525	15
North-West Frontier Province	36,691	20,130	14,057	1,544	348	21	591	8
Central Provinces and Berar	52,483	29,469	15,377	3,526	1,399	70	2,642	17
Burma	180,479	69,209	58,789	40,029	2,282	1,925	8,245	12
Madras	476,281	223,870	172,139	63,694	4,166	163	12,249	—
Bombay	252,112	118,443	43,113	77,733	1,641	680	10,296	7
Ajmer-Merwara	11,214	3,986	5,198	1,375	14	48	593	27
British Baluchistan	10,620	5,791	2,387	1,187	11	161	1,083	23
Coorg	2,634	1,491	906	—	9	13	215	—
Total	1,960,563	966,743	547,477	350,337	21,173	3,899	70,850	12

Note.—The figures in this table are subject to correction. Discrepancies in some provinces await explanation.

It is unnecessary to refer in detail to the annual fluctuations in these figures, but one movement may be noted. The ratio of total discharges and acquittals to total convictions, which in 1901 was about 9 to 10, had risen in 1911 to nearly 11 to 10; discharges and acquittals gained steadily on convictions throughout the decade, outnumbering them for the first time in 1906. As the table above shows, the proportions of acquittals and convictions vary very greatly in different provinces, and the movement in the total figures hardly justifies the inference of a general tendency. The detailed figures show that the main factor was a marked diminution in the proportion of convictions in Madras, where the proportion of cases returned as true is very high and the Local Government have suggested that insufficient use is made of the power of rejecting unfounded complaints; but a similar tendency more or less marked was to be noticed in several other provinces.

Punishments inflicted.—The punishment most frequently inflicted by the Indian criminal courts is a fine, and the fines are mostly small. Thus in 1911 fines of 10 rupees or less numbered 603,369, or over 87 per cent. of the total number of fines. Rigorous imprisonment, *i.e.*, imprisonment with hard labour, is the next most frequent penalty. The large majority of the sentences of imprisonment are for six months or less; sentences to more than two years' imprisonment in 1911 numbered 8,793. Prisoners sentenced to transportation are ordinarily sent to the penal settlement at Port Blair in the Andaman Islands; penal servitude is substituted for transportation in the cases of Europeans and Americans. Apart from the sentences shown in the table, between

Persons sentenced to	1901.	1911.
Death	500	435
Transportation	1,690	2,054
Penal servitude	17	—
Imprisonment, rigorous	144,022	123,083
Imprisonment, simple	16,165	15,070
Forfeiture of property	27	60
Fines	628,065	691,854
Whipping	25,941	9,519

50,000 and 60,000 persons a year are ordered to give security to keep the peace, or for good behaviour, and a certain proportion of these are imprisoned in default. The comparison between 1911 and 1901 shows only one point that calls for special comment—the diminution in the number of sentences of whipping. This was due mainly to the passing of the Whipping Act of 1909, which restricted both the classes of offences for which that punishment may be inflicted and the number of officers who may be empowered to award it. The offences now generally punishable with whipping include theft or house-breaking with a view to theft, in which cases whipping takes the place of any other punishment, and dacoity, robbery with hurt, and some other offences, where whipping may also be ordered as an additional punishment. Theft by a clerk or servant and receiving stolen property were excluded from the list by the Act of 1909, which also repealed the provisions of the law authorising sentences of whipping for second offences in certain cases. Special provision is made for the substitution of whipping for other punishments to a greater extent in the case of juvenile offenders, and in frontier districts. Females, and males above the age of 45, may not be punished with whipping. The maximum number of stripes is 30, though the number of cases in which more than 20 stripes are ordered is comparatively few; in the case of persons under 16 years of age the maximum was by the Act of 1909 reduced to 15 stripes. In the case of youthful offenders, other alternatives to imprisonment besides whipping are provided for by the Reformatory Schools Act.* In 1911 about 1,100 juvenile offenders were whipped under the special provisions of the law authorising the substitution of whipping for other punishments in their case, while the sentences of about 320 boys were commuted to detention in a reformatory school, about 300 youthful offenders were discharged after admonition, and about 280 were delivered to parents or guardians. Some 5,200 persons also were released on probation under the provisions of the law relating to first offenders. The number of boys and girls below the age of 15 admitted to jail during the year was 740.

Appeals and Applications for Revision.—The table below shows how the statistics of appeal and revision in 1911 compared with those for 1901. The bulk of the original criminal work being done by subordinate magistrates, the superior courts are occupied to a large extent with appeals and applications after trial.

	Percentage of Appellants and Applicants for revision, as compared with Number of Persons convicted.		Percentage of Persons dealt with in whose Cases—								Actual Figures, 1911.	
			Appeal or Application was rejected or Sentence or Order confirmed.		Sentence was reduced or otherwise altered (but not enhanced).		Sentence was reversed or Proceedings quashed.		New Trial or further Inquiry was ordered, or reference made to High Court for revision.		Total Number of Appellants and Applicants for revision.	Average duration of Appeals.
	1901.	1911.	1901.	1911.	1901.	1911.	1901.	1911.	1901.	1911.		
												Days.
Bengal	24·1	14·5	64·9	64·0	7·7	9·7	16·4	15·6	10·7	10·7	25,507	—
Eastern Bengal and Assam*	25·9	44·8	62·1	66·3	7·0	7·9	13·8	12·8	17·0	13·0	20,049	—
United Provinces	32·5	23·1	75·1	74·6	7·4	7·7	11·2	12·9	5·5	4·4	24,819	18
Punjab	41·8	43·7	67·0	67·6	11·0	8·7	16·5	16·7	5·1	6·7	30,002	36
N.W. Frontier Province	17·2	14·4	70·2	57·3	12·7	21·7	12·6	12·8	4·3	6·4	2,244	16
Central Provinces and Berar.	15·3	29·3	73·0	66·2	6·2	9·9	15·2	18·1	5·6	5·7	5,534	19
Burma	42·5	35·1	85·0	85·0	4·6	4·6	5·9	7·2	4·0	2·9	34,738	22
Madras	9·2	10·0	67·3	60·6	7·2	8·8	20·7	24·8	4·4	5·6	23,583	—
Bombay	7·7	8·0	70·8	76·3	8·0	7·3	15·0	13·0	5·0	3·2	9,710	23
Total, British India	20·2	20·3	71·9	70·8	7·5	7·9	13·9	14·6	6·3	6·4	182,436	23

* Figures for 1901 are for Assam only.

The small proportion of cases disposed of not shown in this table consists of those in which prisoners died, escaped, or were transferred to another province, and those in which sentences were enhanced. The proportion of sentences enhanced is very small, the total number in 1911 being only 289.

* *See* page 100.

The Finances of Law and Justice.

The receipts and charges shown under the head Courts of Law in the Finance and Revenue Accounts of the Government of India for each year are given in the margin. The receipts from the sale of Court Fee Stamps are also included in the table; the increase during the decade under this head, it is to be noted, more than kept pace with the growth of expenditure on the Courts. It must be observed, however, that the table is not to be regarded as a complete presentation of the financial aspects of the administration of law and justice. The main items included in the total in the first column, taking the figures for 1911–12, are High Courts, £242,795; Chief Courts, £61,195; Judicial Commissioners, £44,889; Law Officers, £187,829; Civil and Sessions Courts, £1,282,833; Criminal Courts, £1,038,920, and Courts of Small Causes, £55,361. Expenditure increased under all heads during the decade, the greatest proportionate increase being under the head Law Officers. Charges on account of buildings and of the pensions of retired officers are not included; while, on the other hand, the revenue from the sale of Court Fee Stamps includes receipts from stamps on petitions addressed to executive officers and from the probate duty on succession. The receipts shown in the second column of the table include those from fines and forfeitures, Court Fees realised in cash, and some other sources.

	Charges.	Receipts.	Net Expenditure.	Gross Revenue from sale of Court Fee Stamps.
	£	£	£	£
1901-02	2,157,707	230,590	1,927,117	2,391,053
1902–03	2,215,289	241,589	1,973,700	2,392,627
1903–04	2,276,659	255,902	2,020,757	2,448,334
1904–05	2,338,244	251,938	2,086,306	2,549,012
1905–06	2,409,749	275,538	2,134,211	2,641,020
1906–07	2,540,496	271,423	2,269,073	2,682,490
1907–08	2,592,452	264,087	2,328,365	2,813,449
1908–09	2,753,586	280,117	2,473,469	2,906,004
1909–10	2,756,749	293,339	2,463,410	3,108,275
1910–11	2,867,030	310,663	2,556,367	3,312,557
1911–12	2,981,996	323,660	2,658,336	3,259,034

CHAPTER VII.

POLICE AND JAILS.

Police.

The whole subject of the organisation and working of the police in British India was referred by the Government of India to a Commission in July 1902, and no branch of the administration received more constant attention throughout the period under review. The report of the Commission, and the Resolution in which the Government of India, after considering it, stated at length their views on the various questions raised, were laid before Parliament.* Further reference will be made below to the report, and to the measures of reform subsequently undertaken; in the first place, some account of the main features of the Indian police system must be given. One feature of special interest, to be noticed at the outset, is that, besides the regular police, it includes as an essential element the ancient institution of the village watch.

Organisation of the Regular Police.—The police establishment forms in most provinces a single force under the local government, and is formally enrolled. In Bombay there is a separate force for each district. The police in each province are under the general control of an Inspector-General, who may be either a police officer or a member of the Indian Civil Service; Deputy Inspectors-General hold subordinate charge of portions of the province, known as "ranges." The chief unit for police as for general administration is the district; each district has a District Superintendent of Police, who is responsible for the discipline and internal management of the force, and is the subordinate of the district magistrate in all matters connected with the preservation of peace and the detection and suppression of crime; he is assisted by one or more Assistant or Deputy Superintendents. Assistant Superintendents are ordinarily recruited in England by competitive examination, from candidates who must be British subjects of European descent, but provision is made for direct appointment in India in exceptional cases. The grade of Deputy Superintendent, which was introduced on the recommendation of the Police Commission, is in the nature of a "provincial" service, and is recruited in India partly by promotion from the rank of Inspector and partly by direct appointment of natives of India who have the educational and other qualifications generally required for the provincial services. The functions and departmental status of Deputy Superintendents are similar to those of Assistant Superintendents, and they are eligible for promotion to district charges. The district is subdivided for police purposes into sections, or "circles," under Inspectors, and the circle is again split up into areas in each of which is a police station in charge of a subordinate officer, now a Sub-Inspector in all parts where the reforms proposed by the Police Commission have been carried out. The standard police-station area, as laid down by the Commission, is about 150 square miles; the actual average is about 200 square miles. Where the work of investigation is heavy, additional sub-inspectors are appointed in order to obviate the necessity of employing officers of lower rank in investigating offences. There are also subsidiary police stations known as outposts, which are most numerous in Bombay. At the headquarters of each district a reserve is maintained, which supplies men for escort and other duties, and serves to strengthen the police in any part of the district when the necessity may arise. The reserve, or the portion of it kept in readiness for dealing with local disturbances, and some of the general duty police, are armed with smooth-bores, or in some cases with rifles. The subordinate officers wear swords, and the truncheon is the general arm of the constable. A small proportion are mounted. A force of military police is still maintained in unsettled frontier tracts in Bengal, Assam, Burma, and on the North-West Frontier.

Village Police.—The regular police are largely dependent for information and assistance, on the village officers. Each police station has within its jurisdiction a number of villages, for each of which there is a *chaukidar* or watchman. South of the Vindhyas the watchman is under the immediate control of the headman, on whom

* Cd. 2478 of 1905.

(Police.)

rests the obligation to report crime and aid the execution of justice. In the greater part of Bengal, on the other hand, there are no headmen, and the *chaukidars* are there virtually a low-paid regular police, while elsewhere in Northern India they are, as a rule, partly subordinate to the village elders or *lambardars* and in part directly responsible to the officer in charge of the police station. The policy of strengthening the control and responsibility of the village headmen was reaffirmed in 1905. The village watchmen are remunerated in different ways in different provinces, by grants of rent-free land, by fees, or by monthly salaries paid from cesses. Hereditary claims to the office are, whenever possible, recognised. The foremost duty of the *chaukidar* is to report crime; but his functions extend to the arrest of offenders, general aid to the police, the maintenance of a watch over bad characters and suspicious persons, and the supply of local information in general. The supervision and control of the village officers is entrusted to the Collector or Deputy Commissioner and his subordinate officers, and not to the regular police.

Town and Railway Police.—In towns generally the organisation is on much the same lines as in rural areas, but in the Presidency towns and Rangoon the police are organised as a separate force under a Commissioner in each case, and European as well as Indian petty officers and constables are enrolled. The railway police are organised separately from the district police, but act in co-operation with them. They are, as a rule, concerned only with the maintenance of law and order, watch and ward over railway property being provided for by the railway administrations. The railway police charges are as far as possible coterminous with the territorial jurisdictions of the local governments, the force in each province being under a Deputy Inspector-General.

Training.—Police recruits until recently were trained at the district headquarters, where they received instruction in drill and were taught the elements of the law relating to their powers and duties. On the recommendation of the Indian Police Commission, central schools for the training of constables have now been established in some provinces. Except in Madras and Burma, a very large proportion of the rank and file are illiterate, and their instruction in subjects other than drill is, therefore, a matter of some difficulty. Special Central Police Training Schools have been established in all provinces for the instruction of candidates for appointment as sub-inspector, inspector, or deputy superintendent; probationary assistant superintendents are also attached to these schools for a period of training.

Police Work.—The Indian law divides offences into "cognisable" and "non-cognisable," according as the culprit may or may not be arrested without a warrant. It is with cases of cognisable crime that the police are mainly concerned; no police officer may investigate a non-cognisable case without the order of a magistrate. In a serious case of cognisable crime the ordinary procedure is somewhat as follows:—Information having been brought to the police station by the village watchman, accompanied very likely by the complainant, the statements are reduced to writing and the officer in charge of the station proceeds to the locality to take up the investigation. Every stage in the proceeding, and its result, is recorded in a diary. If necessary, the investigating officer may search any house for stolen property or other articles throwing light on the crime. If the accused person confesses his guilt, his statement has to be recorded by a magistrate, who must certify that, to the best of his belief, the confession is voluntary, these precautions being taken to guard against the extortion of confessions by torture or undue influence. The police in India may not record any statement or confession by an accused person; what a prisoner says on arrest cannot be used in evidence against him. If the investigation results in the detection of the supposed criminal, the police officer arrests him and sends him to the local magistrate, who either remits him to custody or releases him on bail. The police may not detain an accused person for more than 24 hours without a magistrate's special order. The prosecution of cases before magistrates is an important branch of police work. In special cases a pleader may be engaged, or the work may be performed by the district or assistant superintendent, and cases that come before Courts of Session are conducted by a Government pleader; but ordinarily the prosecution is conducted by an inspector, sub-inspector, or other police officer who has not himself been engaged in the investigation of the case. The police have also important preventive functions. A register is kept at each police station of habitual offenders, suspected characters, and released convicts sentenced for grave crime, and

a watch is kept over their movements by the police and the village watchmen. Vagrants, persons concealing their presence in order to commit an offence, and persons proved to be habitually concerned in the commission of crimes may be required by a magistrate to furnish security for good behaviour; and persons convicted of, or likely to commit, a breach of the peace may similarly be bound over to keep the peace. Throughout India there are castes and tribes who live largely by the commission of crime, especially thefts, robberies, and cattle-lifting, and regard these practices as a normal and quite respectable means of livelihood; their operations have been facilitated by the development of road and railway communications. A special watch is kept over the doings of these sections of the community, and various Acts, it may be mentioned, have been passed for the purpose of reclaiming the most dangerous among them, and of protecting society against their depredations. A powerful agency for the detection of habitual offenders has been secured in the system of recording and classifying the finger-tip impressions of persons guilty of grave crime, which is now used with considerable effect.

Thagi and Dakaiti and Criminal Intelligence Departments.—There existed up to 1904 a special department known as the Thagi and Dakaiti Department. The crime of *thagi* has practically ceased to exist in India, and although robbery and house-breaking by armed gangs are offences with which the authorities have still to cope, the peaceful villager of the present day has throughout the greater part of the country almost lost recollection of the times when his forefathers were harassed and pillaged by marauding bands of freebooters or dacoits. The crime of dacoity, as now defined by the Indian Penal Code, consists of the commission or attempted commission of robbery by five or more persons. The duties of the Thagi and Dakaiti Department had changed with the progress of peace and civilisation; from 1863 onwards it came to be concerned mainly with the suppression of organised dacoity in the Nizam's Dominions and in the Native States of Central India and Rajputana, and with the capture of dacoits who had fled from British to native territory. In 1887 the department was further entrusted with the work of collecting and comparing intelligence regarding organised crime. In 1904 the Thagi and Dakaiti Department as thus constituted was abolished, its establishments in Hyderabad being merged in the police force of that State, while those in Central India and Rajputana were transferred to the control of the Agents to the Governor-General. The former central office was replaced by a central Criminal Intelligence Department under a Director. The object of the department is to collect and communicate information regarding such forms of organised crime as are committed by offenders operating along the railway system, and by criminal tribes, wandering gangs, organised dacoits, professional poisoners, forgers, coiners, and the like, whose operations extend beyond the limits of a single province. Provincial Criminal Investigation Departments have also been organised, with the same object of providing systematic and full information as to important and organised crime and of making a small staff of trained detectives available to help in investigations when required by local officers. The Criminal Investigation Department and the railway police are in most provinces under one Deputy Inspector-General.

The Indian Police Commission.—The terms of reference to the Indian Police Commission, which were of a comprehensive nature, were reproduced in full in the last decennial number of this Statement. It is impossible here to deal at all fully with the report of the Commission, which was submitted in May 1903; it included a summary of the most important recommendations under 127 heads. The report showed that there was much room for improvement in the organisation and working of the police, and in the arrangements for training and supervision, and that the force had hitherto failed to secure the confidence and cordial co-operation of the people. The general nature of the recommendations of the Commission may be indicated by a quotation from the final paragraph of the report:—

"The proposals for reform submitted by the Commission are not . . . of a revolutionary character. They do not involve a complete subversion of the present system, though they aim at its radical amendment. They consist mainly in suggestions for the maintenance and development of indigenous local institutions so as to obviate the vexatious interference of the police in cases of little importance and to promote the co-operation of the people with the police in those of a more serious character; for the restriction of the lowest classes of officers to the discharge, under closer supervision, of those more mechanical duties for which alone they are qualified; for the conduct of investigation by trained officers drawn from the better educated

and more respectable classes of the community; for inspection of police work by carefully selected and trained officers of capacity and tried integrity; for supervision and control by the best European and native officers available; and for organised and systematic action against organised and professional crime. They aim also at the removal of abuses which have been brought to light in connection with police work; at the employment of native agency to the utmost extent possible in each province without seriously impairing the efficiency of the service; at the attraction to the service of good native officers by offering them suitable position and prospects; at the recruiting of superior European officers of a higher class and insisting on their coming more into touch with the people; and at the adoption on the part of the whole force of a more considerate attitude towards all classes of the community so as to secure as far as possible the confidence and co-operation of the people."

Some of the specific proposals of the Commission may be briefly mentioned. In the first place, as regards organisation and recruitment, they recommended that, with a view to securing better qualified men, direct appointment to the higher grades should be substituted to a large extent for promotion from the ranks. In particular, they thought that a clear line should be drawn above the head constable class. Thus the force would consist of (*a*) a European Service, recruited in England; (*b*) a Provincial Service, recruited in India; (*c*) an Upper Subordinate Service, consisting of Inspectors and Sub-Inspectors; and (*d*) a Lower Subordinate Service, consisting of head constables and constables. Sub-Inspectors were to be recruited as a general rule by direct appointment from men educated up to about the matriculation standard, though allowance was made for a certain proportion of promotions from below. Inspectorships were to be filled normally by the promotion of Sub-Inspectors, but in the new grade of Deputy Superintendent, to which reference has been made above, there was again to be a large measure of direct recruitment, to the extent of half the vacancies, from candidates with still higher educational qualifications. Other recommendations were that police-stations should not be placed in charge of officers below the rank of sub-inspector; that a force of armed police should be kept in reserve in each district in readiness to proceed to any place where it might be needed; that a Criminal Investigation Department should be constituted in each province; that a provincial training school should be established in each of the larger provinces for the training of police officers of and above the rank of Sub-Inspector, and that central schools should similarly be established for the training of constables; that the minimum pay of constables should be such as to give a reasonable living wage, in no case less than Rs. 8* a month, and that various improvements should be made in the rates of pay of the higher ranks; that the police forces should be increased in every province; that it was of paramount importance to develope and foster the existing village agencies available for police work; that the existing system of beats should be abolished and the visits of police constables to villages restricted to the purpose of obtaining specific information; that the investigation of offences should be made "on the spot"; that the detention of suspects without formal arrest was illegal and should be rigorously suppressed; that the practice of working for or relying on confessions should be discouraged in every possible way; and that police work should not be judged by statistics, but by local inspection and inquiry.

The proposals of the Commission were calculated to involve an additional expenditure of nearly £1,000,000 a year; the actual increase since 1905, as will be seen from the figures given below, has been considerably more than this. The Commission's main recommendations, including those enumerated above, were accepted by the Government of India, with some modifications in matters of detail, and they have been carried into effect to a very large extent in all provinces. Everywhere the new organisation and methods of recruitment have been adopted, the rates of pay improved, and training schools for officers (though not in all cases for constables) established.

The Government of India, in their Resolution of the 21st March 1905, dealt with the broader aspects of police reform in a passage which may be quoted:—

"Of all the branches of the public service in India," they then wrote, "the police, by its history and traditions, is the most backward in its character. Its origin may be traced to the feudal obligation of the landowners to maintain, by means of an

* It was eventually decided that local governments that considered a minimum of Rs. 7 sufficient should be allowed to adopt that limit.

underpaid and disorderly rabble, the semblance of order on their estates. The taint of its earliest antecedents still affects the morale of the lower ranks: the constable has inherited the reputation, if not the methods, of the barkandaz. The history of the Indian Police under British rule is marked by a series of attempts to introduce more advanced standards of conduct and integrity, and to raise the tone of the force by improving the pay and prospects of its members. The latest of these efforts is represented by the labours of the Commission appointed nearly three years ago. The reforms proposed by them extend to all grades of the police; they leave untouched no detail of its organisation; and they are planned on a scale more comprehensive than has ever been deemed feasible in the past. The present condition of the public revenues has enabled the Government of India to accept the main proposals of the Commission, and to provide at once a large proportion of the cost of carrying them out. It will take a long time to give full effect to the scheme, and longer still before its larger purpose can be visibly fulfilled. The reconstruction of the police is, indeed, merely a step towards the improvement of the administration of criminal justice in India. Success in that higher aim will depend not only on the qualifications and training of the force, but even more on the honest co-operation of the people themselves in the work of reform; on the adoption of higher ethical standards; on the diffusion of general education, especially in its primary branches; on the growth of genuine public spirit and a sense of the common good; and most of all perhaps on the decline of faction and the discouragement, by a more healthy and more courageous public opinion, of the vicious practice of resorting to the machinery of the criminal courts in order to gratify private animosities. As the popular conscience developes in these directions the Governor-General in Council hopes that the great undertaking, the initial stage of which is now approaching completion, will alleviate evils which affect in varying degrees all classes of society, and will confer upon the people benefits commensurate with the labour and thought devoted to its inception and the immense outlay which its execution will entail."

Strength and Cost of Police.—The marginal table shows the sanctioned strength of the civil police at the beginning and end of the decade. The greater part of the increase in numbers took place between the years 1905 and 1909; the large addition to the ranks of the Sub-Inspectors is especially to be noted. The local village watchmen, according to a recent estimate, number about 700,000.

—	1901.	1911.
Inspectors-General and Deputy Inspectors-General	37	51
Superintendents	480	331
Assistant Superintendents		268
Deputy Superintendents	—	234
Inspectors	1,232	1,751
Sub-Inspectors	5,396	9,874
Sergeants	17,682	443
Head Constables		22,349
Constables:		
Foot	117,908	151,398
Water	556	647
Mounted	2,591	2,647
Total strength	163,116*	189,993

* Including 1,721 officers and 15,513 men, paid wholly from other than Imperial or Provincial revenues, whose distribution by ranks is not shown.

The proportion of superior officers — *i.e.*, officers down to and including Assistant and Deputy Superintendents — to subordinate officers and men varies considerably in different provinces. The extremes in 1911 were Burma, with 1 superior officer to 111 inferior officers and men, and the Punjab, with 1 to 287.

In the case of the military police, there was no very marked increase during the decade. The figures of sanctioned strength are given in the second table. Police of this class are employed most extensively in Burma; the force, though under the local Government, is organised in battalions under military officers and largely recruited from the martial races of Northern India.

Total sanctioned strength of Military Police.

—	1901.	1911.
Burma	15,053	16,452
Eastern Bengal and Assam	3,028	2,978
Bengal	395	300
Punjab	287	—
North-West Frontier Province	2,137	2,261

(Police.)

The financial effect of the reforms introduced since 1905 is shown by the next table, which gives the total charges connected with police in each year, as stated in the accounts of the Government of India, "local" expenditure, which amounted in 1901–02 to £267,507 and in 1907–08 to £158,611, being excluded. The reforms having consisted, in a large degree, of improvements in pay, the rise in expenditure was much greater, proportionately, than the increase in the strength of the force. During the same period of 10 years, the receipts credited to police, which include payments on account of police supplied to municipalities and cantonments, and to private companies and persons, as well as fees, fines, and forfeitures (chiefly cattle-pound fees), fell from £162,690 to £122,738.

	Total Police Charges.
	£
1901–02	2,691,344
1902–03	2,737,693
1903–04	2,787,373
1904–05	2,860,934
1905–06	3,061,756
1906–07	3,534,705
1907–08	3,813,354
1908–09	4,196,222
1909–10	4,222,306
1910–11	4,351,612
1911–12	4,602,977

The charges and receipts in 1911–12 are shown in detail below, the figures being taken from the Finance and Revenue Accounts :—

	India, General.	Bengal.	Eastern Bengal and Assam.	United Provinces.	Punjab.	North-West Frontier Province.	Burma.	Central Provinces and Berar.	Madras.	Bombay.	Total.
CHARGES.	£	£	£	£	£	£	£	£	£	£	£
Presidency police -	—	96,245	—	—	—	—	—	—	37,628	84,283	218,157
District police : Provincial superintending officers -	—	16,902	10,195	12,617	13,454	4,351	14,743	7,516	12,516	25,083	117,377
Executive force -	64,220	415,760	267,222	531,568	328,321	64,346	420,771	203,165	472,382	433,951	3,201,705
Village police - -	—	2,882	1,650	153,651	—	—	182	—	5,137	65,869	229,371
Special police, including military - -	—	4,826	79,848	—	10,608	36,155	397,780	—	—	40,779	569,995
Railway police - -	3,835	16,982	7,940	23,504	28,540	—	4,154	5,608	9,769	17,443	117,776
Criminal Investigation Department - -	23,310	23,966	17,927	14,791	8,107	3,174	7,141	6,706	9,801	8,836	123,760
Other heads - -	—	502	2,506	51	1,849	768	299	52	16,713	426	23,164
Total charges in India	91,365	578,065	387,288	736,182	390,878	108,793	845,072	223,046	563,946	676,669	4,601,306
Charges in England	—	—	—	—	—	—	—	—	—	—	1,671
RECEIPTS.											
Contributions received for police furnished to municipal and town funds - -	100	—	—	908	777	—	—	—	—	1,857	3,642
Receipts on account of police supplied to public departments, private companies and persons - -	593	4,476	1,244	1,634	3,424	542	6,482	758	2,515	4,323	25,991
Recoveries on account of Presidency police	—	5,318	—	—	—	—	—	—	4,110	15,288	24,717
Fees, fines, and forfeitures - - -	659	2,045	3,174	1,478	6,260	809	10,617	1	23,588	973	49,603
Other heads - -	1,084	1,078	5,110	2,048	1,473	181	1,482	1,410	1,482	3,438	18,784
Total receipts -	2,435	12,917	9,528	6,069	11,933	1,532	18,580	2,169	31,696	25,879	122,738
Net charges - -	88,930	565,148	377,760	730,113	378,945	107,261	826,492	220,877	532,250	650,790	4,480,239

The average total cost per man of the whole civil police force of British India (officers included) is £19 a year, the provincial averages ranging from less than £17 in the United Provinces and North-West Frontier Province to over £25 in Eastern Bengal and Assam.

Finally, some figures may be given to show how the increases in strength and expenditure were distributed over the provinces :—

	Total Sanctioned Strength of Civil Police.		Total Police Charges.	
	1901.	1911.	1901–02.	1911–12.
			£	£
Bengal	27,971	27,416	413,093	578,065
Eastern Bengal and Assam	2,779*	11,516	114,778*	387,288
United Provinces	34,815	35,779	343,313	736,182
Punjab	17,876	21,040	248,519†	390,878
North-West Frontier Province	3,820	4,046	71,140†	108,793
Central Provinces and Berar	8,764*	11,979	97,913*	223,046
Burma	13,791	16,545	632,455	845,072
Madras	22,692	32,365	318,751	563,946
Bombay	24,602	26,678	430,186	676,669

* Assam and Central Provinces only. † Figures for 1902–03.

The figures in the last two columns include the cost of the military police, which accounts for about a half of the large expenditure in Burma. In the United Provinces, the increase of expenditure is partly accounted for by the conversion into constabulary police and transfer to the charge of provincial revenues of town *chaukidars* formerly paid for by local revenues. The figures of establishment include these *chaukidars*.

Distribution in Relation to Area and Population.—The proportion of police to area and population varies considerably. It will be sufficient to give some figures for 1911 :—

	Number of Police Stations.	Number of Outposts.	Average Area per Police Station.	Average number of Regular Civil Police per 10,000 of Population.
			Square miles.	
Bengal*	840	272	138	4·4
Eastern Bengal and Assam	259	147	358	3·4
United Provinces	844	283	127	7·6
Punjab	463	183	210	9·6
North-West Frontier Province	76	45	179	18·5
Central Provinces and Berar	369	140	275	8·6
Burma*	469	208	500	13·1
Madras	1,338	229	106	7·8
Bombay*	437	1,145	290	12·9

* Excluding the towns of Calcutta, Bombay, and Rangoon. The figures include the railway police, but not military police.

Education.—It was mentioned above that, except in Madras and Burma, a very large proportion of the rank and file of the police are unable to read and write. The reports show, however, some improvement in this respect during the decade. Taking the Indian police as a whole, practically all of the officers, and about half of the men, were in 1911 able to read and write. The proportion of illiterate men is highest—more than three-quarters of the total strength—in the North-West Frontier Province and the United Provinces; the majority are illiterate also in Bengal, Eastern Bengal and Assam, and the Punjab. The proportion of men who can read and write rises in Burma to 83 per cent. and in Madras to 89 per cent.

Statistics of Police Work.—The undesirability of attaching undue importance to statistical results as a test of the merits of police work was a point upon which considerable stress was laid by the Indian Police Commission, who referred to the evils likely to result from the prevalence among subordinate officers of an impression that the advancement of an officer would depend upon his being able to show a high ratio of convictions, both to cases and to persons arrested, and a low ratio of crime. The objection applies more particularly to the use of statistics for small areas; but

(Police.)

they cannot properly be used as a basis of comparison even for larger areas without taking into account the differences in the conditions under which the police work; and, it may be added, they can at the best indicate only very imperfectly the degree of success with which the police carry out the important branch of their duties which consists in the prevention of crime. These considerations have been emphasised in recent orders of the Government of India. Subject to these observations, the figures below, which relate to cognisable crime only, may be given as some indication of the volume of work falling upon the police, and of the wide differences between the conditions and the statistical results in different provinces:—

	Cases reported during the Year.	Cases in which Investigation was refused.	Cases proved or declared to be False.	Cases due to Mistakes of Law or Fact or declared non-cognisable.	Cases ending in Conviction.	Cases ending in Discharge or Acquittal.	Cases not Detected or Apprehended.
Bengal - - -	167,200	6,553	2,826	9,476	97,618	4,330	43,491
Eastern Bengal and Assam - - -	54,512	12,255	1,636	5,180	12,909	1,984	19,528
United Provinces -	150,250	68,495	2,981	905	37,271	4,614	34,099
Punjab - - -	56,497	64	3,386	5,231	21,429	6,058	18,952
North-West Frontier Province - -	5,834	58	327	654	2,377	901	1,487
Central Provinces and Berar - - -	25,338	10,148	1,044	170	5,974	2,116	7,072
Burma - - -	69,232	1,394	5,298	15,543	34,170	3,042	8,724
Madras - - -	169,646	1,830	5,134	8,048	124,838	9,257	17,129
Bombay - - -	78,964	2,276	1,528	9,852	49,733	2,291	12,465
Total, British India, 1911 - - -	784,067	103,715	24,318	55,153	391,238	34,812	163,599
Total 1909 -	768,841	119,331	23,917	57,684	381,219	35,552	148,279
Total 1907 -	796,848	141,326	23,632	55,748	393,633	35,003	138,824
Total 1905 -	789,241	120,052	24,860	57,439	408,271	38,396	133,454

The form of the returns having been altered in 1905, corresponding figures for earlier years are not available.

One or two notes in explanation of noticeable features of the above table will at the same time serve to illustrate the difficulty of drawing inferences of a general nature from the figures. The very large proportion of convictions in Madras is due to the preponderating influence of cases under the head "public and local nuisances," of which 110,350 were reported in 1911, all but a small percentage ending in conviction. In Bengal and Bombay offences under special and local laws in the Presidency towns colour in the same way the total figures for the province. The very numerous cases in the United Provinces in which investigation was refused were almost all under the heads of lurking house-trespass and common theft; the proportion of cases fell continuously in the last four years of the decade, but it is considered that investigation is still not infrequently refused in cases in which it should be made.

The statistics in regard to stolen property show that property is recovered on an average in something like 40 per cent. of cases, while the total value of property recovered is generally about one-fourth of the value of property stolen. The figures vary considerably from province to province and from year to year. In 1911 the value of property recovered was £256,000, the total value of property reported as stolen being £1,118,000.

Discipline and Conduct.—The number of men punished by dismissal from the police force was rather lower at the end than at the beginning of the decade—83 officers and 2,220 men in 1911 as against 230 officers and 2,392 men in 1901. The number shown in the returns as punished departmentally, otherwise than by dismissal, rose from 21,550 to 26,905, and desertions increased from 498 to 838; but against the former increase has to be set the fact that the total of departmental punishments for 1911 includes 8,492 cases in Madras, of a class not included in 1901, in which men were punished with black marks only. The number of men punished judicially by Magistrates or Sessions Courts under the Police Act, or for other offences, was 1,660 in 1901 and 1,639 in 1911. One class of offences must be specially noticed, in view of the accusations frequently brought against the Indian police. The number of

convictions for voluntarily causing hurt, or wrongful confinement, for the purpose of extorting a confession or compelling the restoration of property was 31 in 1911, and averaged for the preceding nine years 18 a year.

Much of the criticism directed against the Indian police in recent years has had reference to cases in which torture has been alleged, and the stamping out of such abuses as occur has been an object constantly kept in view by the local governments and the superior officers of the police. In a large proportion of cases charges of maltreatment or extortion brought against the police are shown to be false or frivolous; but steps have been taken to ensure that all such charges shall be promptly and efficiently investigated, and that cases of proved misconduct shall be brought to the notice of all members of the force by way of warning.

It is satisfactory to notice, finally, that rewards, in the shape either of promotion or of *khillats*, presents, good-conduct stripes, or money, greatly outnumber punishments of all descriptions, and that they increased during the period under review. The total number of men rewarded in 1911 was 42,730.

The main figures for the various provinces have already been given: the treatment of the provinces individually must be limited to some brief notes, with special reference to the working of the police in the year 1911.

Bengal.—Improvements in various directions have been noted as a result of the reforms introduced from 1905 onwards, among which may be mentioned the establishment of three constables' training schools.

Of 39 charges of maltreatment or extortion brought against the police in Bengal in 1911, only 7 resulted in conviction. Out of 113 other charges brought against members of the force, 82 were declared by the Courts to be deliberately false, or mistakes in law or fact, or were dismissed as being vexatious and frivolous, while 5 cases ended in conviction. Measures were taken during the year to improve the administration of the village police.

Eastern Bengal and Assam.—The strength of the police in Eastern Bengal and Assam was reported to be markedly inadequate, and the force worked under peculiar difficulties owing to the prevalence of agitation and unrest during the latter half of the decade. As the table on p. 95 shows, the proportion of police to population was in 1911 still lower than in any other province, but a scheme for increasing the strength of the force and the number of investigating centres is being gradually carried out. A scheme for the establishment of a force of river police, a reform which is really essential for efficient police administration in Eastern Bengal with its vast waterways, has also been taken in hand. A training school for officers and two schools for constables were established in 1907 and the following years; it was decided subsequently to amalgamate them into a combined training school. Six out of 42 criminal cases for ill-treatment instituted in 1911 were prosecuted to conviction.

United Provinces.—Among the reforms recommended by the Police Commission, the establishment of central training schools for constables and the constitution of a special emergency reserve of armed police remained to be carried out at the end of the decade. It is reported that, though much remains to be done, the progress made by the force during the second half of the decade was real and substantial. The most serious feature of the returns for 1911 was the increase in dacoities; the results in many districts were not creditable to the police, and there was evidence that the vigorous use of the powers at their disposal would have largely reduced the tale of dacoities. Greater activity in the control of their subordinates by the gazetted officers of the police was indicated as the remedy. The criminal tribes constitute the most serious and difficult problem with which the police administration of the province is confronted. Three cases of torture or ill-treatment by the police were held to be proved during 1911.

Punjab.—As in the United Provinces, financial and other difficulties prevented the establishment of central schools for constables before the end of the decade; pending their establishment, systematic instruction is given at district head-quarters.

(Police.)

There was a marked increase of crime in 1911, and a serious feature of the report on police administration was the impression, which appeared to be gaining ground, that the investigating officer was becoming more complacent in his attitude towards such an increase, owing to the view that work was not to be judged by statistical returns. Only 7 charges of ill-treatment of a serious nature were brought against the police in 1911, three ending in conviction.

North-West Frontier Province.—The conditions of the North-West Frontier Province are peculiar, and the unsatisfactory nature of the returns of crime cannot be laid at the door of the police. The force in 1911 was up to strength, but the percentage of constables of under three years' service was as high as 43, and it is reported that in spite of the increase of pay in 1906 from a uniform rate of Rs. 7 to a rate of Rs. 8 rising to Rs. 11, the attractions of the service are insufficient to induce men to remain in the ranks, owing to the competition of the labour market and the enhanced cost of living.

Central Provinces and Berar.—Good progress had been made by 1911 with reforms, though re-allocation had not yet been effected in some districts. A training school for investigating officers was opened in 1906. The latest reports indicate that there has been a continued improvement both in the methods of detecting crime and in the relations of the force with the people. In Berar, where five years ago noticeable features were the lack of the sense of responsibility among the village headmen for the watch and ward of their villages, and the almost entire absence of co-operation with the regular police, there has been a great improvement. A marked decrease in dacoities and robberies during the last few years is attributed to the good work of the police.

Burma.—The system of training constables at training depôts at district headquarters is adhered to in Burma as being most suitable, but a school for officers has been established. The police administration in 1911 was satisfactory, in spite of a rise in crime. Recruiting improved, and the shortage in strength was the lowest for several years, though in some districts suitable recruits were still obtained with difficulty. The conduct of the force showed a general improvement, with fewer dismissals and fewer magisterial punishments. The military police continued to be efficient, and in particular did good work in connection with expeditions into unadministered territory.

Madras.—The Madras police organisation formerly differed from that of the rest of India in two important features: the first was the large number of police stations; the second, the absence of the rank of sub-inspector, with the consequence that all police stations were in charge of head constables, who conducted the investigation of offences under the supervision of a relatively large body of inspectors on comparatively low pay. The adoption of the recommendations of the Police Commission therefore necessitated changes of a radical nature, including a reduction in the number of police stations. It is noteworthy that in practically every case where the abolition of a police station was proposed representations in favour of its retention were made by the local population. At the end of the decade re-allocation had been fully carried out in 10 districts and partially in the remainder. Four central training schools for constables were opened or under construction. The number of convictions for extortion in 1911 was 4, the sentences indicating that the misconduct of the delinquents was not of a very grave character. Steady progress was made in almost all branches of police administration.

Bombay.—Reforms were actively carried into effect in Bombay from 1905 onwards. It was reported in 1910 that in the Presidency proper, apart from railways, no police stations remained in charge of head constables. Schemes for reorganised establishments of head constables and constables had been prepared, and it was proposed, as they were carried out, to increase the number of investigating centres and diminish the number of outposts. A training school for officers was established in 1906. It was reported in 1911 that on the whole the police had worked loyally and maintained a creditable standard of efficiency, and that in spite of numerous and increasing difficulties with which the *mofussil* police had to contend the quality of the work showed unmistakable signs of steady improvement.

Jails.

Jail administration in India is regulated generally by the Prisons Act of 1894, and by rules issued under it by the Government of India and the local governments. As has been mentioned in the last chapter, the punishments authorised by the Indian Penal Code for convicted offenders include transportation, penal servitude, rigorous imprisonment (which may include short periods of solitary confinement), and simple imprisonment. Accommodation has also to be provided in the jails for civil and under-trial prisoners.

There are three classes of jails: in the first place, large central jails for convicts sentenced to more than one year's imprisonment; secondly, district jails, at the head-quarters of districts; and, thirdly, subsidiary jails and "lock-ups" for under-trial prisoners and convicts sentenced to short terms of imprisonment.

The jail department in each province is under the control of an Inspector-General; he is generally an officer of the Indian Medical Service with jail experience, and the superintendents of central jails are usually recruited from the same service. The district jail is under the charge of the civil surgeon, and is frequently inspected by the district magistrate. The staff under the Superintendent includes, in large central jails, a deputy superintendent to supervise the jail manufactures, and in all central and district jails one or more subordinate medical officers. The executive staff consists of jailers and warders, and convict petty officers are employed in all central and district jails, the prospect of promotion to one of these posts being a strong inducement to good behaviour.

The general characteristic of the Indian prison system is confinement in association by day and night. The desirability of separate confinement by night, and of cellular confinement during the first part of long, and the whole of short, sentences, is, however, recognised, and though difficulties exist—among which may be mentioned the great cost of providing cellular accommodation, and the necessity for free ventilation in jails in the Indian plains—some progress has been made in recent years, and many sleeping wards have been fitted with cubicles. The provision of cells for separate confinement has been carried farthest in Madras, where at the end of the decade more than a third of the accommodation in central and district jails was in the form of separate cells. Prisoners are divided into the following classes, which are kept separate from one another: persons under trial, civil prisoners, females, boys, youths, and adult male convicts. Habitual offenders are also kept separate, as far as possible. The system of fettering prisoners generally has long been abandoned, and fetters are now used only as a punishment or to restrain violence. The hours of work in jails amount to about nine a day. The dietary varies in different parts of the country with the staple food of the people. Some reference is made in Chapter IX. to the disease and mortality statistics of the jail population, and it need only be observed here that the jail death-rate was on the whole much lower during the period under review than in the preceding decade, and that it has been reduced until it compares favourably with that of the general working population.

Employment of Prisoners.—The work on which convicts are employed is mostly carried on within the jail walls, but extra-mural employment on a large scale is sometimes allowed, as, for example, when a large number of convicts were employed in excavating the Jhelum Canal in the Punjab. Within the walls prisoners are employed on jail service and repairs, and in workshops. The main principle laid down with regard to jail manufactures is that the work must be penal and industrial. The industries are on a large scale, multifarious employment being condemned, while care is taken that the jail shall not compete with local traders. As far as possible industries are adapted to the requirements of the consuming public departments, and printing, tent-making, and the manufacture of clothing are among the commonest employments. Schooling is confined to juveniles; the experiment of teaching adults has been tried, but literary instruction is unsuitable for the class of persons who fill an Indian jail.

Punishments and Rewards.—The conduct of convicts in jail is generally good, and the number of desperate characters among them is small. Failure to perform the allotted task is by far the most common offence. In a large majority of cases the punishment inflicted is one of those classed as "minor." Among the "major" punishments fetters take the first place. Corporal punishment is inflicted in relatively few cases, and the number is steadily falling; the total number of cases in 1911 was 496, as against 1,372 in 1901. The jail regulations provide a system of reward

(Jails.)

as well as of punishment, the principal rewards being promotion to the post of convict warder and remission of sentences. The mark system, formerly in force, was modified in 1907 with a view to making it more intelligible to the average prisoner, and the remission earned is now recorded in "days" instead of "marks." Remission is awarded, according to fixed rules, for industry and good conduct, and for special reasons.

Female and Juvenile Prisoners.—Female prisoners are confined in separate wards, under the charge of female warders. They are subject to the same discipline as male convicts, the tasks being, however, of a lighter nature.

As regards "youthful offenders"—*i.e.*, those below the age of 15—the law provides alternatives to imprisonment, and it is strictly enjoined that boys shall not be sent to jail when they can be dealt with otherwise. The alternatives are detention in a reformatory school for a period of from three to seven years, but not beyond the age of 18; discharge after admonition; delivery to the parent or guardian on the latter executing a bond to be responsible for the good behaviour of the culprit; and whipping by way of school discipline. The number of boys below the age of 15 admitted to jail fell considerably during the decade, the total in 1911 being 629 (of whom 122 had been previously convicted), as against 1,250 in 1901.* The number of girl criminals admitted to jail is very small, and fell more decidedly—from 404 to 111—between 1901 and 1911. Madras now accounts for two-thirds of the girl convicts, and more than a third of the boys; the local Government have directed district magistrates to exercise the closest supervision over sentences on young boys and girls, with a view to reducing the figures. Magistrates generally have been directed to make use as far as possible, in the case of girls, of the power conferred on them by law of discharging on admonition or delivering to the parent or guardian. Social conditions do not permit of girls being detained for considerable periods in reformatory schools, and this alternative has not been made available in their case.

The question of the treatment of "young adult" prisoners has in recent years received much attention. Under the Prisons Act, prisoners below the age of 18 must be kept separate from older prisoners, but the recognition of the principle that an ordinary jail is not a fitting place for adolescents (other than youthful habituals) who are over 15, and therefore ineligible for admission to the reformatory school, has led local governments to consider schemes for going beyond this by treating young adults on the lines followed at Borstal, and considerable progress was made in this direction during the decade. In 1905 a special class for selected juveniles and young adults was established at the Dharwar jail in Bombay; in 1908 a special juvenile jail was opened at Alipore in Bengal; in 1909 the Meiktila jail in Burma and the Tanjore jail in Madras were set aside for adolescents, and a new jail for juvenile and "juvenile adult" convicts was opened at Bareilly in the United Provinces; and in 1910 it was decided to concentrate adolescents in the Punjab at the Lahore District jail, which is now worked on Borstal lines. Other measures had previously been taken in some cases; a special reformatory system for "juvenile adults" had, for example, been in force in two central jails in the Punjab since the early years of the decade, and "Borstal enclosures" had been established in some jails in Bengal. In the Central Provinces adolescents have been concentrated at two jails, and specially treated, for several years past, and the establishment of a special jail for them is contemplated. The essential feature of the treatment provided for adolescents is instruction in useful trades. The results so far achieved are reported to be encouraging; it is reported, among other things, that the juvenile class at Dharwar makes batons for the police throughout the Presidency.

Reformatory Schools.—The number of boys whose sentences were commuted to detention in a reformatory school varied during the decade between 223 in 1904 and 577 in 1910. The schools have been administered since 1899 by the Education department, and the authorities are directed to improve the industrial education of the inmates, to help the boys to obtain employment on leaving school, and as far as possible to keep a watch on their careers. To the seven schools in existence at the beginning of the decade an eighth, at Delhi, was added in 1903; with the opening of this school for the Punjab and North-West Frontier Province, each of the larger provinces had at least one reformatory school. The two schools in Bengal were

* As to the use of alternatives to imprisonment, *see* page 87.

amalgamated in 1908. The seven schools open in 1911 contained 1,312 boys, as compared with 1,227 boys in the seven schools open in 1901.

Jail Statistics.—The following table contains the more important figures relating to the jails in 1911 and some other years of the decade :—

—	Number of Jails.			Number of Prisoners.				Percentage previously convicted among Convicts admitted during Year.	Number of Punishments annually inflicted per 100 of Daily Average Convict Population.	Percentage of Convicts sentenced to Labour employed		Number of Deaths per 1,000 of Average Daily Strength (all Classes).
				Received during the Year (all Classes).		Average Daily Number.				As Prison Officers and Servants.	On Manufactures.	
	Central.	District.	Subsidiary.	Males.	Females.	All Classes.	Convicted Criminals.					
Bengal	7	31	67	70,482	2,778	14,125	12,447	18·8	232	20·6	47·1	17·9
Eastern Bengal and Assam	2	23	36	36,028	866	8,140	7,101	9·4	128	19·5	41·7	31·7
United Provinces	6	44	7	71,276	2,876	23,928	21,862	19·1	139	18·9	43·8	14·6
Punjab	3	21	10	48,128	1,309	12,450	10,992	13	315	22	30	26·4
North-West Frontier Province	—	5	3	9,600	241	1,484	1,076	7	84	24	29	11·4
Central Provinces and Berar	3	18	1	9,273	610	3,577	3,278	19·4	533	21	46·2	31·3
Burma	7	23	—	36,600	1,116	16,281	15,339	24·8	225	30·3	44·7	12·3
Madras	9	5	311	79,770	3,077	12,168	9,898	14	115	16·9	38·8	13·5
Bombay	3	15	33	86,196	4,856	10,131	8,443	10·4	272	24·7	25·3	14·3
Ajmer-Merwara	1	—	5	1,223	72	319	287	70·1	59	18	58	6·3
Coorg	—	1	25	601	17	74	60	9·1	67	24·4	14	—
British Baluchistan	—	2	26	3,312	206	324	†	†	†	†	†	†
Total, 1911	41	188	524	452,489	18,024	103,001	90,783	16·4	210	21·7	40·2	18·2
Corresponding totals:												
1910	40	195	522	459,955	19,288	104,197	91,904	16·9	218	21·4	39·6	18·9
1909	39	194	517	473,160	20,432	105,233	92,809	17·1	236	20·6	40·3	22·4
1907	40	192	523	447,181	20,088	98,853	87,672	16·1	221	21·0	40·9	17·8
1905	40	193	515	447,380	20,704	97,282	86,837	14·0	221	20·4	40·1	19·1
1903	41	196	510	422,754	21,203	93,715	84,025	13·5	227	19·9	37·7	19·5
1901	40	196	500	466,128	24,275	111,381	100,831	14·7	192	20·7	41·5	25·3

† Figures not available.

The figures call for little comment. The jail population was higher in 1901 than in any subsequent year, the number of persons sent to prison having been abnormally large in 1900, a famine year. The lowest figures were recorded in 1903, when releases in celebration of the King-Emperor's Coronation coincided with a low admission rate attributable to prosperous conditions. The average jail population is much higher in the United Provinces than in any other province, though the number of persons sent to prison annually is less than in some other provinces, the reason being that the proportion of comparatively long sentences is larger.

The increase in the proportion of prisoners previously convicted is no doubt attributable, in part at any rate, to improved methods of identification.

Only the main heads of employment are shown in the table. Other prisoners are employed in grinding wheat, or gardening, or on jail buildings. A few are employed by the Public Works Department, and a smaller number still are hired out to municipalities or private individuals, or to other departments.

Transportation.—Transportation is an old punishment of the British Indian criminal law, and a number of places were formerly appointed for the reception of Indian transported convicts. The only penal settlement at the present time is Port Blair in the Andaman Islands. Under existing rules convicts sentenced to transportation for life, or for a term of years of which six have still to run, may be transported to the Andamans, subject to their being physically fit, and to some other conditions in the case of women. The sanctioned scheme contemplates five stages in the life of a male transported convict, the first six months being passed in a cellular jail, the next eighteen months in association in a jail similar to those of the Indian mainland, and the following three years as a convict of the third class kept to hard gang-labour by day and confined in barracks by night. Having thus completed five years, a convict may be promoted to the second class, in which he is eligible for employment in the various branches of the Government services or in the capacity of servant to a private resident. After five years so spent, a well-behaved convict enters the first class, in

134464

(Jails.)

which he labours under more favourable conditions, or is granted a ticket enabling him to support himself, with a plot of land. He may now send for his family or marry a female convict. The three later stages of this discipline have been in force for many years, and the first for some time, the cellular jail having been finished in 1905; but the associated jail for the second stage has not yet been built. Females are kept at intra-mural work under strict jail discipline for three years; for the next two years they are subjected to a lighter discipline, and at the end of five years they may support themselves or marry. Promotion from class to class depends on good conduct. The convicts are employed in jail service, in the erection and repair of jail buildings, in the commissariat, medical, marine, and forest departments, in tea-gardens and at other agricultural work, and in various jail manufactures. Ordinary male convicts sentenced to transportation for life are released, if they have behaved well, after twenty years, and persons convicted of dacoity and other organised crime after twenty-five. *Thags* and professional poisoners are never released. Well-behaved female convicts are released after fifteen years. The release is sometimes absolute and sometimes, especially in the case of dacoits, subject to conditions, *e.g.*, in regard to residence. In some cases released convicts prefer to remain in the settlement as free persons. The settlement is administered by a superintendent, aided by a staff of European assistants and Indian subordinates. The convict population of Port Blair reached its maximum for the decade at the end of 1905–6, when it was 14,709. In 1912 the total was 11,235, consisting of 10,633 males and 602 females, of whom 1,566 and 272 respectively, mostly occupied as cultivators, were "self-supporters." The total population of the settlement was 15,613. A large majority of the convicts, about 89 per cent., are under sentence for life. Of the total number in 1912 about 69 per cent. had been sentenced for murder and about 16 per cent. for dacoity. The number of punishments of all kinds in a year averages about 20 per cent. of the average strength, and the number of escapes about 50, two-thirds of the convicts who escape being recaptured. The death-rate varied during the decade between 23·6 and 42·1 per thousand.

Jail Charges and Receipts.—The table in the margin shows the jail charges and receipts in 1901–02 and 1911–12, as given in the Finance and Revenue Accounts. The figures call for no special comment. According to the figures given in the provincial jail reports, which are for the calendar year, the total expenditure (excluding building charges) per head of the average jail population, in 1911, was Rs. 76·4, the cash earnings per head Rs. 13·9, and the net cost per head Rs. 62·4. The corresponding figures for 1901 were Rs. 65·2, Rs. 10·7, and Rs. 54·4. These figures are for the whole of British India. There is considerable fluctuation from year to year and from province to province. The net cost per head varied in 1911, in the larger provinces, between Rs. 48·6 in Burma and Rs. 80·7 in Bengal.

	1901–02.	1911–12.
Charges:	£	£
Jail manufactures	151,867	155,855
Other jail charges	520,817	579,616
Convict charges at Port Blair and Nicobars	98,612	106,765
Other charges	270	496
Total charges	771,566	842,732
Receipts:		
Sale-proceeds of jail manufactures.	207,565	217,935
Convict receipts at Port Blair	22,629	22,264
Hire of convicts	13,436	7,549
Other receipts	6,893	5,607
Total receipts	250,523	253,354
Net expenditure	521,043	589,378

CHAPTER VIII.

LOCAL SELF-GOVERNMENT.

Rudimentary institutions for the conduct of local affairs have existed in India, from time immemorial, in the village communities, and trade guilds in towns. But between these primitive institutions and the municipality or rural board of the India of to-day there is a wide gulf, and the one class of bodies is not, as a matter of history, developed from the other.

The Indian villages formerly possessed a large degree of local autonomy, of which, however, generally speaking, little now remains. The existing village organisation differs greatly in different parts of India, and headmen and bodies of villagers play various parts by law or custom in the work of village administration. In some cases artificial organisations have been formed by Government in large villages or groups of villages for specific purposes: such are the Union Panchayats in Madras, referred to below, and the local committees or *panchayats* which in some other provinces assist in the assessment or administration of rates locally levied for sanitary and other purposes. The Decentralization Commission, to whose report reference may be made for a fuller account of the existing arrangements, recommended that, with a view to making the village the basis of the system of rural self-government, an attempt should be made, gradually and tentatively, to constitute and develope village councils, to which the time-honoured title of *panchayat* might be applied, for the administration of village affairs. This is, however, still mainly a question of future possibilities, and for present purposes it is unnecessary to refer at greater length to the subject of village self-government. An Act was passed in 1912 to provide for the establishment of *panchayats* in the Punjab; but it was contemplated that the areas for which these bodies would be established would be larger than villages, and their functions are limited to the disposal of petty civil suits. In the Punjab, it may be mentioned, village self-government survives to a considerable extent, on a basis of custom, and the desirability of bringing it under statutory regulation has been questioned.

The main concern of this chapter, then, is with the municipalities and rural boards that represent the principle of local self-government in the towns and in the country areas respectively. These bodies, as has already been observed, do not trace their descent from the ancient institutions of the country. Local self-government, in the legally constituted form in which it now prevails in India, is essentially a product of British rule. The existing system of municipal administration is for the most part of comparatively recent introduction, while local institutions in rural areas are of still later origin, and have been also of slower growth.

To deal first with municipalities, the Presidency towns had some form of municipal administration, first under Royal Charters and later under statute, from comparatively early times, but outside of them there was practically no attempt at municipal legislation before 1842. An Act passed in that year for Bengal, which was practically inoperative, was followed in 1850 by an Act applying to the whole of India. Under this Act and subsequent provincial Acts a large number of municipalities were formed in all provinces. The Acts provided for the appointment of commissioners to manage municipal affairs, and authorised the levy of various taxes, but in most provinces the commissioners were all nominated, and from the point of view of self-government these Acts did not proceed far. It was not until after 1870 that much progress was made. Lord Mayo's Government, in their Resolution of that year introducing the system of provincial finance, referred to the necessity of taking further steps to bring local interest and supervision to bear on the management of funds devoted to education, sanitation, medical charity, and local public works. New municipal Acts were passed for the various provinces between 1871 and 1874, which, among other things, extended the elective principle, but only in the Central Provinces was popular representation generally and successfully introduced. In 1881–2 Lord Ripon's Government issued orders which had the effect of greatly extending the principle of local self-government. Acts were passed in 1883–4 that greatly altered the constitution, powers, and functions of municipal bodies, a wide extension being given to the elective system, while independence and responsibility were conferred on the committees of many towns by

permitting them to elect a private citizen as chairman. Arrangements were made also to increase municipal resources and financial responsibility, some items of provincial revenue suited to and capable of development under local management being transferred, with a proportionate amount of provincial expenditure, for local objects. The general principles thus laid down have continued to govern the administration of municipalities down to the present day.

In several provinces there are, besides municipalities, "notified areas," *i.e.*, small towns which are not fit for full municipal institutions, but to which parts of the Municipal Acts are applied, their affairs being administered by nominated committees. These are to be regarded as embryo municipalities.

The establishment of boards for dealing with local affairs in rural areas is a relatively recent development. No such boards existed in 1858, though some semi-voluntary funds for local improvements had been raised in Madras and Bombay, while in Bengal and the United Provinces consultative committees assisted the district officers in the management of funds devoted to local schools, roads, and dispensaries. The system of raising cesses on land for purposes of this description was introduced by legislation in Madras and Bombay between 1865 and 1869; in the case of Bombay, nominated committees were to administer the proceeds of the cess. The year 1871 saw a wide development of legislation for local administrative purposes, partly due to growing needs, and partly the result of the financial decentralisation scheme of Lord Mayo's Government, various Acts being passed in different provinces providing for the levy of rates and the constitution of local bodies, in some cases with an elected element, to administer the funds. The whole system was reorganised in accordance with the policy of Lord Ripon's Government. Under the Orders of 1881–2 the existing local committees were to be replaced by a system of boards extending all over the country. The lowest administrative unit was to be small enough to secure local knowledge and interest on the part of each member of the board, and the various minor boards of the district were to be under the control of a general district board, and to send delegates to a district council for the settlement of measures common to all. The non-official element was to preponderate, and the elective principle was to be recognised, as in the case of municipalities, while the resources and financial responsibilities of the boards were to be increased by transferring items of provincial revenue and expenditure. It was, however, recognised that conditions were not sufficiently advanced or uniform to permit of one general system being imposed in all provinces, and a large discretion was left to local Governments. The systems introduced in different parts of India by the Acts of 1883–5 (most of which are still in force) consequently varied greatly.

Another class of local administrative bodies consists of the boards or "trusts" to which the control of harbour works, port approaches, and pilotage in the chief ports is entrusted. The Improvement Trusts constituted in recent years in Bombay and Calcutta may also be mentioned in this connection.

The value of local self-government as an instrument of political and popular education, and the importance of including an advance under this head in any scheme for effectively associating the people of India in the work of every-day administration, were recognised and emphasised afresh when the question of reconstituting the legislative councils was under discussion. Some steps have since been taken, as will be noticed below, in the direction of enlarging the independent powers of local bodies, and revising their constitution, in accordance with the principle laid down by the Government of India in 1882, that the control of Government "should be exercised from without rather than from within," and that "Government should revise and check the acts of local bodies, but not dictate them."

Municipalities.

The table on the next page shows the number and constitution of the municipalities in each province at the beginning and end of the decade, the figures for 1901–02 being given in *italics*.

The total number of municipalities has altered little for many years past. New municipalities have been formed from time to time, but there have also been removals from the list. There was, indeed, a rather marked decrease during the period under review, and the number in 1911–12 was actually less than it was thirty years earlier. This result was brought about by the reduction to "notified areas" of a considerable

(Municipalities.)

	Number of Municipalities.	Population within Municipal Limits.	Total Number of Members.	By Qualification.			By Employment.		By Race.	
				Ex-officio.	Nominated.	Elected.	Officials.	Non-Officials.	Europeans.	Indians.
Calcutta	1	896,067	50	—	25	25	5	45	21	29
	1	*847,358*	*51*	*1*	*25*	*25*	*7*	*44*	*27*	*24*
Bombay	1	979,445	72	—	16	56	6	66	17	55
	1	*776,006*	*72*	—	*16*	*56*	*7*	*65*	*12*	*60*
Madras	1	518,660	36	1	15	20	4	32	12	24
	1	*509,346*	*33*	*1*	*8*	*24*	*10*	*23*	*8*	*25*
Rangoon	1	293,316	25	—	6	19	5	20	13	12
	1	*218,602*	*25*	—	*6*	*19*	*4*	*21*	*14*	*11*
District Municipalities.										
Bengal (excluding Calcutta)	111	1,968,292	1,513	98	554	861	178	1,335	156	1,357
	157	*2,839,764*	*2,204*	*110*	*942*	*1,152*	*334*	*1,870*	*271*	*1,933*
Bihar and Orissa	54	1,170,530	776	94	274	408	134	642	132	644
Assam	16	117,880	167	34	77	56	48	113*	37	130
	14	*94,982*	*140*	*21*	*68*	*51*	*49*	*91*	*30*	*110*
United Provinces	87	3,014,806	1,185	93	192	900	195	990	142	1,043
	104	*3,231,852*	*1,399*	*152*	*211*	*1,036*	*328*	*1,071*	*260*	*1,139*
Punjab	107	1,878,417	1,224	222	436	566	253	971	103	1,121
	137	*2,071,970*	*1,498*	*230*	*473*	*795*	*268*	*1,230*	*93*	*1,405*
N.-W. Frontier Province	6	141,928	116	35	81	—	35	81	18	98
	10	*186,375*	*162*	*50*	*112*	—	*51*	*111*	*23*	*139*
Central Provinces and Berar	56	871,780	758	21	257	480	157	601	72	686
	57	*881,748*	*749*	*20*	*258*	*471*	*183*	*566*	*101*	*648*
Burma (excluding Rangoon)	45	699,798	570	177	297	96	194	376	161	409
	41	*668,264*	*534*	*169*	*273*	*92*	*201*	*333*	*150*	*384*
Madras (excluding City)	61	2,077,545	896	71	376	449	168	728	134	762
	60	*1,903,890*	*905*	*66*	*415*	*424*	*194*	*711*	*155*	*750*
Bombay (excluding City)	158	2,354,932	2,130	387	830	913	457	1,673	137	1,993
	166	*2,369,768*	*2,278*	*441*	*953*	*884*	*620*	*1,658*	*181*	*2,097*
Coorg	5	14,159	51	18	24	9	19	32	8	43
	5	*15,249*	*57*	*18*	*32*	*7*	*18*	*39*	*5*	*52*
Ajmer-Merwara	3	114,999	53	6	15	32	9	44	8	45
	3	*102,820*	*52*	—	*19*	*33*	*18*	*34*	*9*	*43*
British Baluchistan	1	17,021	20	6	14	—	8	12	8	12
	1	*13,517*	*14*	*5*	*9*	—	*6*	*8*	*5*	*9*
Total 1911–12	714	17,129,575	9,642	1,362	3,390	4,890	1,875	7,758	1,179	8,460
Total 1901–02	*759*	*16,691,511*	*10,173*	*1,284*	*3,820*	*5,069*	*2,298*	*7,875*	*1,344*	*8,829*

* Six members not classified.

number of the smaller municipalities in the Punjab and United Provinces. The figures showing the constitution of the municipalities call for little comment. Taking them as a whole, the proportion of elected members was in 1911–12 rather more than a half, whereas in 1901–02 it was slightly less. The proportions of non-officials and Indians, already high in 1901, also increased during the decade. Elected members are in the majority in the cities of Bombay, Madras, and Rangoon, and in Bengal (excluding Calcutta), Bihar and Orissa, the United Provinces, and the Central Provinces; in the North-West Frontier Province and Baluchistan, on the other hand, there are no elected members, and in Burma they form a small minority. Non-officials outnumber officials everywhere, and Indians outnumber Europeans to an even greater degree, except in Rangoon. Taking the municipalities individually, some of the commissioners are elected in the great majority of cases. Representation in the larger municipalities is in general by wards or classes of the community, or both. Voters must be residents* not below a specified age, and property or status qualifications are generally laid down. The chairman or president of the municipal corporation is sometimes nominated under the orders of the local Government, but more often chosen by the commissioners from among themselves. The only provinces in which there has been in the past a large proportion of elected non-official chairmen are Madras, the Central Provinces, and the two Bengals; but Bombay has now to be added to the list, in view of the changes made in that province in the closing years of the decade. Various provisions exist as to the exercise of control by Government, particularly as regards

* Generally male residents; but in a large number of municipal areas in Bombay women who possess the prescribed qualifications are entitled to vote, and in some other cases they are not expressly excluded, though they seldom if ever exercise the right to vote,

(Municipalities.)

finance and appointments. No loans can be raised without Government sanction, and generally speaking municipal budgets, and alterations in taxation, require the sanction of the local Government, or of a Commissioner. Proposals for giving municipal committees a larger degree of independence were put forward by the Decentralization Commission, and some action on these lines has been taken. Government may provide for the performance of any duty which the commissioners neglect, and may suspend them in case of incompetence, default, or abuse of powers.

Municipal Revenue and Expenditure.—A general idea of the sources from which the municipalities derive their funds, and the objects to which they are devoted, may be gathered from the tabular statement of revenue and expenditure given on pages 108 and 109. In the provinces in which octroi is levied generally, it is the most important source of income; in Bengal, where it contributes only a small amount, this tax is levied only in Sambalpur,* which formerly belonged to the Central Provinces. The octroi duties have admitted disadvantages, but they are familiar through long usage to the inhabitants of the North and West of India. The possibility of abolishing them was under consideration during the decade, and it was decided in the United Provinces to take this step in many municipalities, but the alternative of direct taxation is not a popular one. Precautions are taken to limit the tax to articles actually consumed in a town, and to prevent it from becoming a transit duty. The list of dutiable articles contains in each case only staple articles of local consumption, and goods in transit are allowed to pass in bond or receive a refund of the duties on leaving the town. Articles of food are the most important class of goods subject to octroi taxation.

A tax on houses and lands is levied, to some extent in all provinces, and is the main source of municipal revenue where there is no octroi. Taxes on professions and trades, and on animals and vehicles, are generally levied, as also is a water-rate in the large towns that have been furnished with waterworks. Tolls on roads and ferries and lighting and conservancy rates contribute to the receipts in most provinces. The average incidence of municipal taxation per head of municipal population in 1911–12, for British India as a whole, was Rs. 2·95. Leaving out of account the Presidency towns, where the figures are higher, the provincial averages ranged from Rs. 3·08 in the North-West Frontier Province and Rs. 2·38 in the Punjab, to Rs. 1·35 in Madras and Rs. 1·02 in Coorg. Other sources of revenue are municipal lands and buildings, conservancy receipts (other than the rates), educational and medical fees, receipts from markets and slaughter-houses (a very important item in Burma), and interest on investments. The total receipts in British India under some of the more important heads not shown separately in the main table, in 1901–02 and 1911–12 respectively, are compared in the marginal table. The increase in grants from Government is to be specially noticed.

—	1901–02.	1911–12.
	£	£
Tax on animals and vehicles	94,016	127,949
Tax on professions and trades	69,739	105,836
Tolls	75,644	100,046
Conservancy rates	201,365	348,749
Rents of lands, houses, &c.	71,604	119,103
Sale-proceeds of land, &c.	24,246	99,951
Revenue from educational institutions	41,613	42,228
Revenue from markets and slaughter-houses	180,565	271,061
Grants from Government	120,291	462,275

Municipal functions are classified under the heads of public safety, health, convenience, and instruction. Within these heads the duties are many and varied. Expenditure, apart from that on general administration and collection, which amounts to something less than 10 per cent. of the total, is similarly classified. The principal normal functions of municipalities now are the construction, upkeep, and lighting of streets and roads, and the provision and maintenance of public and municipal buildings; the preservation of the public health—principally with reference to the provision of medical relief, vaccination, sanitation, drainage, and water supply, and

—	1901–02.	1911–12.
	£	£
Lighting	123,192	235,447
Police	112,941	11,862
Hospitals and dispensaries	173,993	264,301
Roads	274,412	489,193
Schools and colleges	148,458	238,467
Interest on loans	319,996	461,304

* Now in Bihar and Orissa.

measures against epidemics; and education, particularly primary education. The amounts expended in British India as a whole under some of the more important sub-heads not shown in the main table are given in the margin. All heads of expenditure, except "police," shared conspicuously in the increase of expenditure that occurred during the decade. In the case of the police, practically the whole expenditure in 1901–02 was accounted for by the United Provinces, the Punjab, and Bombay City. In the Punjab alone was there any considerable municipal expenditure under this head at the end of the decade. Some account of the very important work represented by the largely increased expenditure on water supply and drainage is given in the next chapter.*

Money is raised by loan for water supply and drainage schemes the cost of which is too large to be defrayed from ordinary revenues. Except for the Presidency towns, the municipalities borrow chiefly, though not entirely, from Government. The table on page 109 shows the net debt—*i.e.*, the balance of loans and deposits less the balances of sinking funds and recoverable advances—at the beginning and end of the period under review. It will be noticed that the cities of Calcutta and Bombay account between them for the greater part of the total debt.

The Presidency Towns.—The corporations of the Presidency towns occupy a special position, and are constituted under special Acts; they may conveniently be noticed separately, before the district municipalities in the various provinces are dealt with. Their resources and powers are much larger than those of any district municipality, and the Calcutta and Bombay corporations in particular are allowed very full discretion in the ordinary work of municipal administration. The local Governments do not pass the budgets of these two corporations, or interfere with their liberty of regulating taxation within the limits laid down by the law.

Calcutta.—The municipal administration of Calcutta was regulated throughout the decade by the Calcutta Municipal Act of 1899, which replaced an Act of 1888, the working of which had not been altogether satisfactory. The Corporation, as remodelled by the Act of 1899, consists of a Chairman, appointed by the local Government, and fifty commissioners, half of whom are elected at triennial ward elections, while the remainder are appointed, four each by the Bengal Chamber of Commerce and the Calcutta Trades Association, two by the Port Commissioners, and fifteen by the local Government. The Act also constitutes a smaller body, the General Committee, consisting of the Chairman with twelve of the commissioners, four elected by the ward commissioners, four elected by the other commissioners, and four appointed by the local Government. There are various special committees and sub-committees.

The entire executive power is vested in the Chairman, to be exercised subject to the approval or sanction of the Corporation or General Committee whenever this is expressly directed in the Act. To the Corporation are reserved the right of fixing the rates of taxation and such general functions as can be efficiently performed by a large body, while the General Committee stands between the deliberative and executive authorities, and deals with those matters that are ill-adapted for discussion by the whole Corporation but too important to be left to the disposal of the Chairman alone.

Power is reserved to the local Government to require the municipal authorities to take action in certain circumstances, and their sanction is required to large projects.

The reconstituted Corporation began work in April 1900, its efforts being in the first place mainly directed to reorganisation, and then to the completion of the drainage scheme and the carrying out of the scheme for the conversion of the intermittent water supply into a continuous system, and to the punctual collection of the rates. The local Government recorded the opinion, after three years' experience of the new arrangements, that there was no want of driving power in the revised constitution, and that it had fulfilled the object of preventing action from being strangled by debate. On the other hand, the lack of interest in the triennial elections has been a disappointing feature. In 1903 only two seats were contested, and in 1906 only ten. In 1909, in spite of an amendment in the rules which facilitated the registration of voters and increased the number on the roll from under 10,000 to over 28,000, there were contests in only eight wards, and only in three of them was any real interest evinced.

---

* *See* page 143.

Revenue and Expenditure of Municipalities in British India, 1911–12.

Note.—The totals for 1901–02 are not in all cases strictly comparable with those for 1911–12. In the earlier figures "notified areas" are included in the Punjab and North-West Frontier Province, and octroi receipts are gross, except in the United Provinces and Bombay City, refunds being shown as expenditure. The amount of these refunds was substantial in the case of the Bombay District Municipalities.

	Bengal.		Eastern Bengal and Assam.	United Provinces.	Punjab.	North-West Frontier Province	Central Provinces and Berar.	Burma.	Madras.		Bombay.		Minor Provinces.	Total, 1911-12.	*Total, 1901–02.*
	Presidency Corporation.	District Municipalities.							Presidency Corporation.	District Municipalities.	Presidency Corporation.	District Municipalities.			
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Revenue:															
Municipal rates and taxes: Octroi, *less* refunds	—	1,405	—	245,134	264,386	28,757	57,238	—	—	—	115,792	185,953	26,436	925,101	*816,479*
Tax on houses and lands	215,135	107,261	27,367	19,628	23,366	71	6,364	130,126	52,372	85,361	331,755	56,521	704	1,056,030	*659,242*
Water-rate	135,624	30,312	7,853	24,450	3,548	290	14,483	50,683	34,026	30,843	138,408	54,173	434	525,127	*307,377*
Other rates, taxes, and tolls	161,750	128,769	46,406	62,717	8,021	65	32,501	118,375	29,797	71,472	124,485	72,977	1,863	859,192	*571,875*
Realisations under special Acts	5,743	6,957	3,108	9,087	4,653	142	7,161	5,148	—	1,292	10,163	3,064	525	57,043	*39,159*
Revenue from municipal property and powers apart from taxation	85,265	34,346	8,357	105,366	98,369	10,714	28,266	182,717	35,359	64,458	64,407	94,276	7,665	819,567	*473,572*
Grants and contributions from Government, local funds, &c	12,898	82,677	26,574	120,426	33,548	2,594	23,884	68,340	36,597	94,458	—	97,628	229	599,852	*188,398*
Miscellaneous	32,836	4,589	3,422	13,879	21,545	1,714	6,539	10,432	11,766	17,595	29,292	12,531	4,684	170,826	*112,664*
Total Revenue, 1911–12	649,251	396,317	123,081	600,686	457,436	44,348	176,435	565,822	199,916	365,478	814,301	577,123	42,541	5,012,736	*3,168,767*
Total Revenue, 1901–02	*401,330*	*283,370*	*16,357**	*364,135*	*317,696*	*44,637*	*121,596*	*310,572*	*113,301*	*190,255*	*517,782*	*454,435*	*33,301*	*3,168,767*	—
Extraordinary and Debt—Receipts, 1911–12	51,333	101,099	8,713	47,904	18,687	1,574	50,740	90,615	135,351	64,544	2,834,144	204,265	659	3,609,628	*2,330,445*

Expenditure :															
General administration and collection charges - -	57,389	27,624	7,822	59,244	49,553	4,193	21,292	40,267	16,465	22,108	51,518	53,037	5,699	416,210	*423,097*†
Public safety (lighting, fire, &c.) - - - - -	66,962	23,929	5,156	31,938	29,114	2,766	6,228	37,378	6,691	12,681	39,328	30,143	2,251	294,565	*259,247*
Public health and convenience :															
Water supply (including capital outlay) - -	77,766	39,272	21,210	63,357	55,986	2,133	42,267	46,732	33,767	37,182	45,919	108,574	2,722	576,889	*253,049*
Drainage (including capital outlay) - -	51,240	24,409	3,100	52,065	27,019	2,288	15,226	21,289	50,498	7,623	96,379	33,710	245	385,092	*232,652*
Conservancy - - -	101,917	99,110	38,795	98,852	58,929	6,205	31,811	84,653	21,463	62,245	139,309	87,833	12,137	843,261	*632,946*
Other heads (roads, hospitals, &c.) - -	131,906	102,655	31,052	95,511	126,853	13,655	44,709	179,877	73,765	116,152	172,803	152,321	9,337	1,250,591	*672,406*
Public instruction - -	3,827	11,116	4,465	25,681	35,508	5,393	19,248	46,480	2,230	30,590	33,109	84,831	2,270	304,747	*180,128*
Contributions and miscellaneous (including interest on loans) - - -	149,819	24,222	8,469	78,174	52,143	1,564	13,920	63,370	33,050	32,400	268,118	39,153	8,974	773,378	*586,549*
Total expenditure, 1911–12	640,826	352,338	120,069	504,821	435,105	38,197	194,701	520,047	237,929	320,980	846,483	589,603	43,634	4,844,734	*3,240,074*
Total expenditure, 1901–02	*455,285*	*273,446*	*15,671**	*338,462*	*312,053*	*29,733*	*105,951*	*348,630*	*124,754*	*214,142*	*583,188*	*408,908*	*29,851*	*3,240,074*	—
Extraordinary and Debt—Disbursements, 1911–12.	74,893	104,053	9,057	99,277	25,474	1,158	24,762	83,698	131,617	63,357	2,796,510	145,143	2,033	3,561,032	*2,144,745*
Net amount of Debt, 1912	2,951,294	244,819	36,623	790,050	292,317	978	141,200	990,113	406,423	178,842	3,198,440	347,741	18,984	9,597,826	—
Net amount of Debt, 1902	*1,900,989*	*191,943*	*798**	*549,085*	*265,823*	*1,769*	*79,823*	*374,032*	*255,584*	*98,468*	*2,836,076*	*308,673*	*19,543*	*8,878,957*	—

* Assam only.

† Including refunds, £136,260.

(Municipalities.)

The financial position of the Corporation is satisfactory. The annual rateable valuation of the city increased greatly—from £1,599,000 to £2,478,000—between 1902 and 1912, while the consolidated rate, which includes the general rate, water rate, lighting rate and sewage rate, was levied throughout at 19½ per cent., the statutory maximum being 23 per cent.

—	1901–02.	1911–12.
Revenue:—	£	£
Tax on houses and lands	148,282	215,135
Other rates and taxes	203,485	297,374
Expenditure:—		
General administration, &c.	38,202	57,389
Lighting and fire	33,780	66,950
Water supply*	37,500	77,766
Drainage*	58,171	51,240
Conservancy	84,097	101,917
Roads	41,256	75,784

* Including capital outlay.

The marginal table compares some of the main heads of revenue and expenditure for 1901–2 and 1911–12. The total figures have already been given in the table on page 108. The incidence of taxation per head of the population increased from Rs. 6·5 in 1901–2 to Rs. 9·6 in 1911–12. The progress of the water supply and drainage schemes, and the constitution of the Calcutta Improvement Trust, are dealt with in the section on sanitation.†

Bombay.—The municipal corporation of Bombay, which formed the model for the new Calcutta constitution, dates in its main features from 1872, and continues to be regulated by the Act of 1888, as amended. The Act was amended during the decade in numerous points of detail, and some important changes were made by the City of Bombay Police Charges Act of 1907, which relieved the corporation of the police charges of the city, and made over to them in exchange further responsibility for primary education, medical relief, and vaccination. The effects of the changes then made are to be seen in the tabular statement of municipal expenditure below.

The Corporation consists of 72 councillors, of whom 36 are elected by wards, 16 by the justices of the peace, 2 by the Fellows of the University, and 2 by the Bombay Chamber of Commerce, the remaining 16 being appointed by Government. The general municipal government is vested in the Corporation, while the ordinary business is transacted by a Standing Committee of 12 councillors, 8 appointed by the Corporation and 4 by Government. The president of the corporation is elected by the councillors, but is not, like the chairman of the Calcutta Corporation, an executive officer. The chief executive authority is vested in a separate officer, appointed by Government, usually from the ranks of the Indian Civil Service, styled the Municipal Commissioner, who can, however, be removed by a vote of 45 councillors. The Bombay constitution has worked well, and the citizens have shown both public spirit and ability in the conduct of the administration.

The receipts and expenditure under some of the most important heads are shown in the margin. The municipal revenue rose rapidly throughout the decade, as a result of the revision of assessments, the rise in rents, the extension of building, and the general prosperity of the city. The total rateable assessment increased from £1,909,000 in 1902 to £3,217,000 in 1912. In view of the flourishing state of the finances, the general tax was reduced to the legal minimum of 8 per cent. in 1907, but it was increased again in 1910, in view of the shrinkage of cash balances and the steady rise in expenditure, to 10⅛ per cent., the legal maximum being 12 per cent. The incidence of municipal taxation per head of population was Rs. 8·6 in 1901–02 and Rs. 10·9 in 1911–12. The increase in expenditure was checked in the last two years of the decade, and the financial position in 1912 was sound, the total liabilities being rather over £4,000,000, as against assets valued at nearly £6,000,000. The outbreak

—	1901–02.	1911–12.
Revenue:	£	£
Octroi	82,101	115,792
Tax on houses and lands	179,971	331,755
Water rate	102,818	138,408
Expenditure:		
General administration, &c.	38,503	51,518
Lighting and fire	24,367	39,324
Police	33,335	—
Water supply*	16,503	45,919
Drainage*	62,753	96,379
Conservancy	122,663	139,309
Roads	34,205	74,865
Hospitals and dispensaries	9,982	34,846
Schools and colleges	6,810	30,289

* Including capital outlay.

† *See* page 141.

of plague threw a serious burden on to the Corporation; up to the end of 1911–12 the total expenditure incurred on this account amounted to rather over £500,000, of which £97,000 was met by a contribution from Government. The work done by the Bombay Improvement Trust is dealt with elsewhere.*

Madras.—A new Municipal Act for the City of Madras was passed in 1904. By this Act the number of the municipal commissioners, to whom as a body the name Corporation was now applied, was increased from 32 to 36, besides the President, and provision was made for the appointment of three commissioners, each by the Madras Chamber of Commerce and the Madras Trades Association, and of two by such other associations, corporate bodies, or classes of persons as the local Government might direct, while the number to be elected at divisional elections was fixed at 20. Under the Act previously in force the total number of elected commissioners was not more than 24. The remaining commissioners were appointed, as they are under the new Act, by the Local Government, who also appoint the President. The Act of 1904 also introduced various other changes in the law which need not be specially noticed; it was modelled to a large extent on the Calcutta Act of 1899. Executive authority is vested in the President, who is removable, under the existing law, by a vote of 28 commissioners. A Standing Committee, consisting of the president and eight other commissioners, is mainly concerned with financial and building questions. The President, like the chief executive officers in Calcutta and Bombay, is usually a member of the Indian Civil Service. The number of persons enrolled as voters in 1911–12 was 9,824, rather more than 6 per cent. of the total adult male population. The control of the local Government over the municipality has hitherto been more stringent than in the other Presidency towns.

Some of the main heads of revenue and expenditure are shown in the margin. The incidence of taxation per head increased from a little over Rs. 2 in 1901–02 to Rs. 3·4 in 1911–12. The most important work done during the decade was in connection with the water supply and drainage schemes, which are referred to in the next chapter. Substantial grants have been made by Government towards the expenditure under these heads. The municipal administration was not very favourably reported on in the earlier years of the decade, but measures of reorganisation have been introduced and a considerable improvement has been recorded. It was decided in 1911, in view of the very unsatisfactory report on the aided elementary schools, to carry out a programme of direct expenditure on elementary education, involving the construction and maintenance of 40 properly equipped Corporation schools.

—	1901–02.	1911–12.
	£	£
Revenue :—		
Tax on houses and lands -	36,288	52,372
Tax on animals and vehicles -	7,445	7,159
Water rate - - - - -	14,473	34,026
Contribution from Government	12,613	36,577
Expenditure :—		
General administration, &c. -	7,579	16,465
Water supply* - - - -	12,118	33,767
Drainage* - - - - -	32,008	50,498
Conservancy - - - - -	22,701	21,463
Roads - - - - - -	9,894	26,423.

* Including capital outlay.

District Municipalities.—*Bengal (including Bihar and Orissa).*—The Municipal Act of 1884 remained in force in Bengal, and no important amendment was made

* Page 142.

(Municipalities.)

during the period under review. The Act provides, as a general rule, that two-thirds of the commissioners in each municipality shall be elected, and that the chairman shall be elected by the commissioners, but certain towns are excepted. The main sources of income are the tax on houses and lands and the alternative tax on persons according to their circumstances and property, with conservancy rates. In view of the redistributions of territory in 1905, the year 1905–06 is taken as the starting point for comparison in the marginal table. There was a marked increase in the closing years of the decade in the receipts from grants from provincial and local funds and contributions from private individuals, which in 1911–12 amounted to £83,000, as against £28,000 in 1905–06. Largely owing to liberal grants from Government, considerable progress has been made in the last few years in the improvement of the urban water supply, and many municipalities have undertaken costly schemes of surface drainage. Municipal administration was, in general, favourably reported on throughout the decade, though in some cases there was serious neglect and mismanagement. The interest taken in elections varies, but is reported to have increased greatly in some parts since the municipalities were given the right of electing members of the provincial legislative councils. Some of the large municipalities have shown great energy in grappling with the problems presented to them, and considerable appreciation of the true ideals of municipal administration, but many have shown no great anxiety to improve, have often too readily accepted the usual plea of poverty, and have shown a disposition to wait till improvements are forced upon them.

—	1905–06.	1911–12.
	£	£
Revenue :—		
Tax on houses and lands	78,186	107,261
Tax on persons	25,941	*25,224*†
Conservancy	47,258	62,522
Expenditure :—		
Lighting	16,410	19,879
Water supply*	16,536	39,272
Drainage*	10,671	24,409
Conservancy	78,614	99,110
Hospitals and dispensaries	28,331	37,803
Roads	33,457	42,317

* Including capital outlay.
† Figures for 1910–11 ; those for 1911–12 are not available.

The financial control exercised by Government was in 1910 relaxed in the case of some of the larger municipalities to the extent of giving them a free hand with their budgets, the divisional Commissioners being expected merely to ensure that the necessary balances were maintained and that due provision was made for the service of loans, and, generally, that the provisions of the law were complied with. In the case of all municipalities, Commissioners were instructed to refrain, as far as possible, from interference with details, and to endeavour to guide municipalities rather by friendly advice than by explicit direction.

Eastern Bengal and Assam.—The municipalities of Eastern Bengal were, throughout the decade, under the Bengal Act of 1884, as were also some of those in Assam. The remaining urban areas under municipal law in Assam were constituted under an older Act, and some of them were not municipalities proper, but "unions" or "stations" merely. In 1911–12 elected members were included in seven out of the 16 municipal committees in Assam. The administration of the municipalities in Eastern Bengal and Assam has been, in some respects, unfavourably reported on in recent years. Common defects were a failure to utilise in the best manner the means of securing revenue and a want of economy in expenditure. Inferior methods and low rates of taxation were in many cases obstinately maintained, while work was paid for at extravagant rates. Some important water supply schemes were carried through during the decade, but little was spent on drainage, and it was reported that in many towns sanitary arrangements were less complete than taxpayers had a right to expect.

—	1905–06.	1911–12.
	£	£
Revenue :—		
Tax on houses and lands	16,810	27,367
Tax on persons	13,165	*13,100*†
Conservancy	15,302	22,286
Expenditure :—		
Water supply*	5,143	21,210
Drainage*	3,041	3,100
Conservancy	24,211	38,795
Hospitals and dispensaries	9,704	5,161
Roads	11,442	17,216

* Including capital outlay.
† Figures for 1910–11 ; those for 1911–12 are not available.

United Provinces.—The amendments introduced in the United Provinces Municipalities Act (I. of 1900) during the decade call for no special notice. The Act lays down as a general rule that at least three-quarters of the members of each municipal board shall be elected, and there were throughout the period under review only two municipalities without elected members. The chairman is generally elected by the board, subject to the approval of the Local Government. In practice, the District Magistrate has usually been elected; but special efforts have been made in the last few years to instal non-official chairmen where suitable candidates can be found. The question of amending the law so as to give larger powers to the municipalities has also been under consideration in connection with the recommendations of the Decentralization Commission. The number of municipalities was reduced in 1904 by the conversion of 15 of the more backward of them into "notified areas." Other "notified areas" were subsequently constituted, and the total number at the end of the decade was 45, with a population of 321,127, and an income of £18,400. Octroi has hitherto been the main source of income in most of the municipalities, with the notable exception of Cawnpore, where through trade is very important; octroi has there been levied, since 1893, only on animals for slaughter, and the municipality relies for a large part of its revenues on a terminal tax, levied on both imports and exports. The question of municipal taxation was referred to a special committee in 1908, and it was decided in 1911, on its recommendation, to abolish octroi in more than half of the municipalities in which it was then levied. In some cases it was abolished before, or shortly after, the end of the decade, when the number of municipalities levying octroi was 74, as against 82 in 1902. The change was not expected to be popular, and the question of finding alternative sources of revenue remained under discussion. A "tax on circumstances and property" was generally favoured. Considerable activity in regard to sanitation was shown by many municipalities, and the funds available for this and other purposes were increased by the decisions of Government to relieve the municipalities of police charges (from 1906) and of direct charges on account of plague (from 1907). In Allahabad, Cawnpore, and Lucknow the municipal boards administer trust funds, created in 1908, for improving hygienic conditions by opening out congested areas and making broad roads. In Allahabad and Cawnpore separate paid chairmen for the municipal boards have been appointed since 1908. Municipal administration was generally satisfactory, and a growing interest in elections, not always attributable, however, to an intelligent concern for the welfare of the locality, was reported. The outstanding feature of the year 1911–12 was the promulgation of the orders relating to the improvement of the sanitary services, under which all municipal boards with an annual income of £3,333 or more will be required to employ a health officer. In all, 27 towns were affected. As part of the same scheme, all towns with an annual income of £1,333 or more will be required to employ one or more trained sanitary inspectors. The assistance given by Government to municipalities in 1911–12 for works of improvement far exceeded the record of previous years, the total sum distributed in subventions being nearly £113,000.

—	1901–02.	1911–12.
	£	£
Revenue :—		
Octroi	208,555	245,134
Tax on houses and lands	11,879	19,628
Terminal tax and toll	20,749	23,715
Water rate	14,137	24,450
Rents of lands, &c.	22,286	35,626
Expenditure :—		
Police	33,445	224
Water supply*	28,918	63,357
Drainage*	21,193	52,065
Conservancy	71,948	98,852
Roads	28,697	42,207

* Including capital outlay.

Punjab.—The Punjab Municipal Act of 1891 was replaced towards the end of the decade by a new Act (Punjab Act III. of 1911). Various improvements suggested by experience were introduced, and more extended powers in some directions were given to municipal committees; but no changes of a kind calling for detailed treatment here were made. Under the law as it now stands the local Government fixes the proportion of nominated and elected members, but it is laid down as a general rule that not more than one-third of a committee may consist of nominated officials. The committees may elect their own presidents, subject to the approval of the local

(Municipalities.)

Government or the Commissioner. The powers of self-government provided for in Municipal Acts were granted much more freely in the Punjab than elsewhere in India, and there were in the province in 1906-07 no less than 35 municipalities with less than 5,000 inhabitants, besides 52 "notified areas." Experience showed that the grant of municipal government was by no means an unmixed blessing in the case of small towns distant from district head-quarters, and that in several instances powers had been exercised with partiality if not with corruption. The working of the octroi system especially had been faulty, and the cost of collection of the tax out of all proportion to the revenue derived from it. From 1907 onwards a large number of the smaller towns were reduced to "notified areas," so that at the end of the decade there were only 107 municipalities, as against 137 at the beginning, while "notified areas" increased from 46 to 104. The figures for "notified areas" are excluded from the marginal table. In 1911-12 they had a population of 373,016, and an income of £36,100. The octroi duties, which are the main source of revenue in the municipalities, were the subject of considerable discussion during the decade. In 1905-06, in view of the evidence that many of the municipalities had been living to a large extent on the taxation of through trade, a new policy was introduced by laying down that in all municipalities refunds should be granted without proof of previous payment of duty. The octroi schedules also were revised, and octroi was abolished, subsequently, in the towns from which the municipal status was taken away. It is reported, however, to be certainly the least unpopular form of taxation in the Punjab. Of the 107 municipalities existing at the end of the decade 74 included an elected element. A keen interest in elections was evinced in some municipalities, but in others apathy was the rule, and it was reported that nomination was more sought after than election. The working of the municipalities was in general fairly satisfactory, though the sectarian spirit showed itself in many places a great obstacle to progress.

——	1901-02.	1911-12.
Revenue:	£	£
Octroi	209,674	264,386
Tax on houses and lands	10,310	23,366
Expenditure:		
Police	35,117	9,681
Water-supply*	19,258	55,986
Drainage*	11,301	27,019
Conservancy	42,709	58,929
Hospitals and dispensaries	29,324	40,021
Roads	17,856	43,741

* Including capital outlay.

The Local Government decided to relieve the municipalities of police charges from 1911. Municipal committees will be expected to devote the funds thus set free to the improvement of sanitation, education, and other services that are more directly under their control.

North-West Frontier Province.—The municipalities in the North-West Frontier Province are constituted under the Punjab Act, but all members are nominated. Octroi is the only tax of any importance and the main source of revenue: changes on the lines of those referred to in the case of the Punjab were made in the octroi arrangements during the period under review. Several of the smaller municipalities also were converted into notified areas towards the end of the decade, with the result that the number of municipalities fell from 10 to 6, while notified areas increased from one to eight, with a population of over 50,000 and an income of £4,400 in 1911-12. The working of the municipalities was reported to have shown some improvement and to be generally satisfactory.

——	1901-02.	1911-12.
Revenue:	£	£
Octroi	24,458	28,757
Expenditure:		
Police	4,073	1,141
Water supply*	1,643	2,133
Drainage*	1,126	2,288
Conservancy	4,289	6,205
Hospitals and dispensaries	3,200	4,438
Roads	1,370	1,667

* Including capital outlay.

(Municipalities.)

Central Provinces and Berar.—The Acts in force throughout the greater part of the decade were the Central Provinces Municipal Act of 1903 and the Berar Municipal Law of 1886. The former Act differed from its predecessor for the most part in points of detail, but it introduced for the first time provisions for constituting small towns as "notified areas." It lays down that not less than two-fifths of the members of a municipal committee shall be non-officials. The Berar law provides that, as a general rule, three-quarters of the members shall be elected. Fifty out of 57 municipalities in 1902, and 49 out of 56 in 1912, included elected members. In the Central Provinces proper, very full effect has been given for a long time past to the policy of placing the chairmanship in non-official hands, and the same policy was applied in some of the Berar municipalities towards the end of the decade. Octroi, though levied in only half of the municipalities in the Central Provinces and in none of those in Berar, is the chief source of income. The octroi administration continued to be carefully scrutinised, and revised rules for assessment and collection were brought into force. The conclusion arrived at was that some at least of the evils upon which the United Provinces Committee based their wholesale condemnation of octroi taxation did not exist in the municipalities of the Central Provinces, and that those that did exist were in no way so serious as to defy remedy; but the question of substituting some other tax in some of the smaller municipalities was under consideration. In the absence of octroi duties, the incidence of taxation is lighter in Berar than in the Central Provinces proper—Rs. 1·3 per head as against Rs. 2·1 in 1911–12. Some improvement in municipal administration was recorded during the decade, but in many cases very little interest was shown in elections. There were in 1912 seven "notified areas," with a total population of 45,274 and an income of £5,300.

	1901–02.	1911–12.
	£	£
Revenue:—		
Octroi	58,831	57,238
Expenditure:—		
Water supply*	10,355	42,267
Drainage*	2,762	15,226
Conservancy	21,608	31,811
Roads	7,504	14,160

* Including capital outlay.

Burma.—Municipal administration in Burma continued to be regulated by the Act of 1898. Under this Act, each municipal committee consists of elected and nominated members, the latter not exceeding one-fourth of the total number, unless in the opinion of the local Government the circumstances of the municipality make it necessary to fill a larger proportion, or the whole, of the places by nomination. It has not been possible in practice to apply the principle of election very widely. At the end of the period under review, elected members sat on 12 out of the 46 municipal committees. The Deputy-Commissioner or chief civil officer of the station concerned is generally President. The Rangoon Municipality, though administered under the general Act, stands apart. The Municipal Committee consists of 25 members, 16 of whom are elected by members of the European, Burmese, Hindu, Chinese, and Muhammadan communities, and three by commercial bodies. The remaining six, including the President, who is an officer of the Burma Commission, but whose time, since 1907, has been wholly given to municipal affairs, are appointed by the Government. Some idea of the resources and activities of the

	Rangoon.		Other Municipalities.	
	1901–02.	1911–12.	1901–02.	1911–12.
	£	£	£	£
Revenue:—				
Tax on houses and lands	42,345	85,192	35,349	44,934
Water rate	15,109	40,826	9,212	9,856
Conservancy	24,233	56,798	6,386	22,253
Markets and slaughter-houses	18,469	29,291	69,473	97,309
Expenditure:—				
General administration, &c.	13,308	15,619	16,835	24,648
Water supply*	38,063	28,370	5,231	18,362
Drainage*	19,644	10,372	1,827	10,917
Conservancy	21,826	35,078	29,018	49,575
Hospitals and dispensaries	15,969	17,526	21,755	40,221
Roads	24,530	20,172	29,280	26,845

* Including capital outlay.

(Municipalities.)

municipalities in Burma is given by the figures in the margin. The incidence of taxation per head rose during the decade in Rangoon from Rs. 5·8 to Rs. 9·8, and in the remaining municipalities from Rs. 1·4 to Rs. 2·3. In Rangoon the decade was marked by a considerable increase in the municipal revenues, partly due to increases of taxation, which were necessary to keep pace with the growth of expenditure. The town of Rangoon accounts for the greater part of the outstanding debt of the Burma municipalities. The advent of plague threw a heavy burden on the resources of the municipalities during the latter half of the decade, and many much-needed public works had continually to be postponed for lack of funds. Elections, generally speaking, aroused little interest, and it was frequently necessary to nominate members to seats for which candidates were not forthcoming. In Moulmein, where there was a majority of elected members, neglect and inefficiency made it necessary in 1906 to abolish the system of election, and to take special steps to restore the affairs of the municipality to a satisfactory footing. An interesting experiment was reported from Bassein in 1909, when a referendum was taken on the question of undertaking a water supply scheme; the result was unfavourable to the scheme, but the committee, being of opinion that the people did not understand the proposals put before them, decided to proceed with it. There were at the end of the decade 17 "notified areas," with a population of 96,569 and a total income of £38,000.

Madras.—The Madras District Municipalities Act of 1884, as amended in 1897, remained in force without any further substantial amendment throughout the decade. It was supplemented by the Madras Hill Municipalities Act of 1907, passed chiefly to provide for the levy of enhanced taxation in the Hill municipalities, and for the better control of buildings therein. The Act leaves the proportion of elected members to be fixed by the Local Government, but provides that not more than one-fourth of a council shall be officials, and that, where election is allowed, three-fourths of the councillors shall as a general rule be so chosen. The number of municipalities without any elected members was very small—four in 1902 and five in 1912. A majority of the councils elect their own chairmen; two-thirds of the chairmen at the beginning of the decade, and 42 out of 46 in 1912 (leaving out of account 15 municipalities in which the office was vacant at the end of the year), were non-officials. A few of the councils consisted entirely of Indian members. Practically all of the municipalities in Madras are towns of over 10,000 inhabitants, semi-urban areas being constituted as local fund unions. Octroi is not levied, the chief source of revenue being the tax on houses and lands. Tolls also make a substantial contribution; municipalities are expected to spend at least a half of the income from this source on the maintenance of roads. The total income of the municipalities was largely increased in the latter years of the decade by grants from Government in aid of sanitation, and, apart from the municipal expenditure under these heads, substantial amounts were expended by Government direct on municipal water supply and drainage works. The report on the working of the municipalities in 1911–12 was to the effect that a fair degree of efficiency was attained in the majority of cases. Indications of distinct retrogression were noted in eight towns, leaving out of account six in which the administration was seriously affected by plague. Factions and personal animosities still hampered municipal administration to some extent.

—	1901–02.	1911–12.
Revenue:—	£	£
Tax on houses and lands	58,647	85,361
Tolls	26,244	34,677
Water rate	11,004	30,843
Expenditure:—		
Water supply*	41,565	37,182
Drainage*	2,799	7,623
Conservancy	50,066	62,245
Hospitals and dispensaries	20,947	30,723
Roads	18,125	36,713

* Including capital outlay.

Bombay.—The Bombay District Municipal Act of 1901 provides that half the members of a municipal committee shall ordinarily be elected, and that not more than

half of those nominated shall be officials. Special provision is made for towns with more than 15,000 inhabitants, which may be declared City Municipalities, and are then allowed to appoint executive officers with extensive functions. Nine new city municipalities were created in 1911, the total number in 1911–12 being 23. Provision is also made for the constitution of "notified areas." The number of municipalities fell slightly during the decade, several being abolished in accordance with the desire of the inhabitants. About three-quarters of the municipalities contain an elected element. In 1908 a new stage was reached in the history of municipal administration by the withdrawal of much of the official control with which it had formerly been associated. Up to that time in no municipality did the proportion of elected members exceed half of the total membership, and in the great majority of cases the President was appointed by Government. City municipalities were now given the privilege of electing two-thirds of their councillors, while all municipalities not excepted for special reasons were empowered to select their own Presidents. The first concession was subject to the condition that the executive must be strengthened by the appointment of a Chief Officer, and the second to the condition that the elected President must secure the votes of at least two-thirds of the members. The Local Government announced their intention of allowing municipalities in future great latitude in the administration of their affairs, while retaining and exercising, whenever the public interest might demand, the full powers of control vested in them by the law. Up to 1912 the privilege of selecting their own presidents had been conferred on 93 municipalities, and more than half of them had selected non-officials. Several of the city municipalities had been granted the larger proportion of elected members, on complying with the necessary conditions. The recent record of municipal administration in Bombay is described as being on the whole satisfactory, and in some instances distinctly encouraging; but it was necessary in 1909–10 to suspend the municipality of Ahmedabad, the largest town in the province after Bombay, on account of gross maladministration. A committee of management was appointed to restore order to the administration. The octroi system was reported to have worked smoothly, but the question of substituting some other form of taxation was under consideration, as in other provinces. The apparent drop in the octroi revenue shown in the marginal table is due to a change in the method of accounting; in 1901–02 the gross receipts were given, and refunds were shown as expenditure. The net receipts, according to the provincial reports, were £115,513. The figures of expenditure on water supply and drainage illustrate the increasing attention paid to sanitation under the stimulus of liberal grants from Government. The municipal expenditure on education is higher than in any other province. Fourteen "notified areas" were constituted during the decade; they had in 1911–12 a population of 64,609, and a total income of £2,800. The municipalities of Ahmedabad, Kaira, and Rajapur remained under suspension in 1911–12, and the Erandol municipality was superseded during the year.

	1901–02.	1911–12.
Revenue:—	£	£
Octroi	208,708†	185,953
Tax on houses and lands	46,444	56,521
Water rate	26,830	54,173
Expenditure:—		
Refunds	93,459	867
Water supply*	22,105	108,574
Drainage*	6,618	33,710
Conservancy	65,987	87,833
Schools and colleges	45,427	77,882
Hospitals and dispensaries	17,603	24,972
Roads	23,630	62,771

* Including capital outlay. † Gross receipts.

District and Local Boards.

The duties and functions assigned to the municipalities in urban areas are in rural areas entrusted to District and Local Boards. It has already been said that the systems of rural local government in the various provinces differ widely. The Madras organisation, which provides for three grades of local boards, most nearly resembles the pattern set in the original orders. Throughout the greater part of that province important villages and groups of villages are organised as "Unions," each controlled by a *panchayat*. These bodies receive the proceeds of a light tax on houses, and spend them mainly on sanitation. Next come the Taluk

(District and Local Boards.)

Boards, which form the agency for local works in the administrative sections into which the districts are divided. Finally, there is the District Board, with general control over the local administration of the district. In Bombay there are only two classes of boards, for districts and *talukas* respectively. In Bengal, the Punjab, and the North-West Frontier Province the law requires a District Board to be established in each district, but leaves the establishment of subordinate local boards to the discretion of the local Government. The Bengal Act authorises the establishment of village Unions also, but this provision has not been very largely used. The United Provinces Act formerly in force directed the establishment of district and sub-district boards, but the latter were abolished, as mentioned below, in 1906. The system in the Central Provinces bears some resemblance to that which prevails in Madras, the villages being aggregated into "circles," and the circles into "groups," each of which has a Local Board, while for each district there is a District Council having authority over the Local Boards. In Assam district boards have not been introduced, and independent boards are established in each sub-division. Neither district nor sub-district boards exist in Burma, or in Baluchistan. District boards were started in Lower Burma in accordance with Lord Ripon's Local Self-Government Resolution of 1882, but the members took no active interest in them, and they died out after a few years. The district funds are now administered by the Deputy-Commissioners of districts.

The degree to which the elective principle has been introduced varies greatly in different parts of India; but there is a considerable proportion of elected members everywhere, except in the North-West Frontier Province, where the system of election was abolished in 1903. On the whole, however, the principle of representation is much less developed in rural than in municipal areas. In Madras the elective system, previously applied to the district boards only, was extended to the Taluk boards in 1909. In the United Provinces and the Central Provinces there is a substantial majority of elected members. The following table shows the constitution of the District and Local (*i.e.*, sub-district) boards in each province in 1911–12, the figures for the latter class of boards being given in italics :—

Province.	Area within Rural Board Limits.	Population.	Number of Boards.*	Total Number of Members.	By Appointment.			By Employment.		By Race.	
					Ex-officio.	Nominated.	Elected.	Officials.	Non-Officials.	Europeans and Anglo-Indians.	Indians
	Sq. miles.										
Bengal	67,900	42,209,523	25	509	133	166	210	158	351	92	417
			71	*843*	*49*	*437*	*357*	*100*	*743*	*38*	*805*
Bihar and Orissa	71,875	31,713,266	18	391	107	135	149	128	263	142	249
			40	*489*	*53*	*380*	*56*	*76*	*413*	*71*	*418*
Assam	32,762	5,917,407	*19*	*316*	*76*	*64*	*176*	*80*	*236*	*133*	*183*
United Provinces	107,050	47,182,044	48	893	3	271	619	247	646	92	801
Punjab	90,151	17,662,389	29	1,117	246	479	392	259	858	76	1,041
			17	*313*	*18*	*107*	*188*	*18*	*295*	*1*	*312*
N.W. Frontier Province	13,214	1,907,727	5	218	51	167	—	51	167	25	193
Central Provinces and Berar	83,223	12,552,652	21	517	10	130	377	72	445	16	501
			79	*1,333*	*27*	*357*	*949*	*143*	*1,190*	*7*	*1,326*
Madras	132,544‡	39,004,860‡	25	765	124	282	359	268‡	428‡	129‡	567‡
			95	*1,484*	*97*‡	*989*‡	*318*‡	*403*	*1,081*	*74*‡	*1,330*‡
Bombay	122,791	17,927,582	25	544	113	189	242	135	409	67	477
			212	*3,087*	*439*	*1,278*	*1,370*	*605*	*2,482*	*130*	*2,957*
Coorg	1,583	174,976	1	18	7	9	2	12	6	7	11
Ajmer-Merwara	Not stated	366,204	1	41	16	9	16	10	31	4	37
Total of above figures	723,093†	216,618,630	198	5,013	810	1,836	2,366	1,340	3,604	650	4,294
			533	*7,865*	*759*	*3,612*	*3,414*	*1,425*	*6,440*	*454*	*7,331*
Total 1901–02	708,174†	198,851,991	191	4,722	839	1,630	2,253	1,311	3,411	633	4,089
			532	*7,911*	*215*	*4,459*	*3,237*	*1,362*	*6,549*	*448*	*7,463*

* Besides 393 Union Committees or *Panchayats* (with 3,749 members, of whom only 43 were Europeans) in Madras, 56 in Bengal, and 5 in Bihar and Orissa.

† Excluding Ajmer-Merwara.

‡ Figures for 1910–11.

(District and Local Boards.)

The various Acts usually leave it to the local Government to decide whether the chairman of the district board shall be elected or nominated. In most provinces the Collector has, as a general rule, been appointed, though in the Central Provinces the president is elected, and is usually a non-official. In the United Provinces election, subject to the veto of the local Government, was prescribed by the Act of 1906, but in practice the Collector is chosen. As regards the subordinate boards, the law and practice vary. Generally speaking, the sub-district boards are on the footing of subordinate committees or agencies of the district boards, with very limited powers and resources; but in Madras they exercise independent authority, subject to the general control of the district boards, in regard to the less important roads, primary education, medical work, and sanitation.

Provision is made, on much the same lines as in the case of municipalities, for the exercise of control in certain directions by Government or its officers.

The Decentralization Commission, having in view the admitted failure of sub-district boards as a whole, under existing arrangements, except in Madras and Assam, put forward proposals for making them the principal agencies of rural board administration by giving them independent resources, separate spheres of duty, and large responsibilities. Proposals for giving the district boards a larger measure of independence were also put forward.

Revenue and Expenditure.—The sources of income open to rural boards are much narrower and less elastic than those of the municipalities. The greater part of their revenue is derived from a cess which they are empowered to levy on the land, and which usually does not exceed one anna in the rupee on the annual rent value (or, in *ryotwari* provinces, the Government assessment). The cess is ordinarily collected by Government agency along with the land revenue, and varies in amount with the latter. Since 1905 the income derived from the land cess has been supplemented by a special Government contribution calculated at the rate of 25 per cent. of that income. Substantial amounts, apart from this special contribution, are granted to the district boards by the Local Governments for various purposes. Apart from receipts in connection with their educational and medical institutions, and markets, the only other important sources of independent revenue are pounds and ferries, and, in Madras, road tolls. Except in Madras, the sub-district boards have generally no independent sources of income, and merely receive such moneys as the district boards may allot to them. In Madras the Taluk boards receive half the land cess levied in their areas, as well as certain miscellaneous revenues.

The receipts under the main heads in 1911–12 are shown below, as given in the provincial reports:—

—	Provincial Rates.	Education (including contributions).	Medical (including contributions).	Railways (Gross), Irrigation, and Navigation.	Police (Cattle Pounds).	Civil Works (including contributions).	Total 1911–12.*	Total 1901–02.*
	£	£	£	£	£	£	£	£
Bengal	194,437	48,151	4,111	4,605	24,165	103,172	400,137	459,794
Bihar and Orissa	157,055	23,859	6,124	190	14,121	68,583	285,507	—
Assam	50,665	11,129	3,540	—	5,671	24,912	111,370	73,626
United Provinces	244,013	106,063	33,766	—	34,089	104,014	533,547	370,925
Punjab	183,681	45,493	8,347	3,747	7,130	85,092	358,262	211,832
North-West Frontier Province	13,441	2,224	817	782	173	7,479	25,489	18,246
Central Provinces and Berar	69,199	36,851	572	—	31,562	21,300	176,235	114,206
Madras	436,985	43,662	30,407	35,623	—	377,263	1,079,778	638,087
Bombay	189,178	130,901	9,444	—	11,181	87,911	455,384	295,687
Ajmer-Merwara	1,199	117	471	—	340	1.118	3,567	2,184
Coorg	2,066	179	166	—	216	1,731	4,984	5,395
Total 1911–12	1,541,919	448,629	97,763	44,948	128,648	882,575	3,434,259	2,189,982
Total 1901–02	1,354,752	66,828	26,039	26,128	79,932	266,898	2,189,982	—

* Including heads not shown here, but excluding debt, deposits, and advances.

The totals for 1901–02 under the heads Education, Medical, and Civil Works are not comparable with those for 1911–12, as contributions from Government and other boards, which in the former year were shown under a separate head (totalling 240,769*l.*), were in 1911–12 shown under the heads to which the sums contributed

(District and Local Boards.)

were respectively devoted. The sources of income not shown in the table include land revenue, interest, and receipts from public gardens, veterinary work, exhibitions, and fairs.

The incidence of taxation is naturally much lower than in municipal areas, varying between one penny and threepence a year per head of population.

The principal normal functions of rural boards are the maintenance and improvement of roads and other communications, education—especially in its primary stages—the upkeep of medical institutions, vaccination, sanitation, veterinary work, the construction and maintenance of markets and rest houses, and the charge of pounds and ferries. They may also be called upon to devote their funds to famine relief. The table below gives the main figures for 1911–12 :—

——	Education.	Medical.	Civil Works.					Total,* 1911–12.	Total,* 1901–02.
			Buildings.	Communications.	Water Supply and Water-works.	Drainage Works.	Total.†		
	£	£	£	£	£	£	£	£	£
Bengal - - -	96,817	23,520	7,944	178,171	23,701	453	249,149	405,237	480,405
Bihar and Orissa - -	49,469	21,160	7,945	130,714	6,647	2,849	188,545	282,776	—
Assam - - -	34,577	13,869	1,099	41,860	7,627	134	56,647	112,939	70,300
United Provinces -	162,833	66,234	68,573	140,553	40	427	247,950	519,126	362,531
Punjab - - -	87,677	39,028	34,792	62,748	888	303	149,363	358,948	210,459
N.W. Frontier Province	6,469	3,970	5,230	1,815	130	310	9,533	26,420	16,824
Central Provs. and Berar	60,485	14,166	20,602	18,639	2,582	326	54,925	155,786	90,235
Madras - - -	94,802	128,442	38,652	378,535	20,721	1,627	549,030	945,568	703,362
Bombay - - -	182,395	28,751	27,955	155,840	26,016	9	247,849	487,825	270,833
Ajmer-Merwara - -	549	425	209	1,087	—	—	2,078	3,518	2,545
Coorg - - -	1,033	691	223	2,106	122	—	3,410	5,528	4,298
Total 1911–12 -	777,106	340,256	213,225	1,112,066	88,474	6,438	1,758,479	3,303,670	2,211,794
Total 1901–2 -	456,573	252,179	78,293	703,969	25,396	1,015	1,017,711	2,211,794	—

* Including heads not shown here, but excluding debt, deposits, and advances.
† Including other heads and establishment charges.

The heads of expenditure not shown include general administration, cattle-pounds, veterinary, public gardens, exhibitions and fairs, and famine relief.

Public works of different kinds account for, roughly, half of the total expenditure. In Madras and Bengal the district boards employ district engineers, who superintend local public works, and a move in this direction has recently been made in the Central Provinces ; elsewhere the more important works paid for and controlled by the district boards are generally carried out through the agency of the Public Works Department.

As is mentioned elsewhere,* the Government of India in 1906–07 provided for the relief of district boards from various charges that they had previously borne, and in 1908–09, by deciding to exclude the accounts and estimates of rural boards from the Imperial budget, prepared the way for larger local decentralization in respect of the boards' finances.

Bengal (including Bihar and Orissa).—The Bengal Local Self-Government Act of 1885 is still in force ; it was extensively amended by Bengal Act V. of 1908, but the main principles were left unaltered. The Act, as has already been mentioned, provides for the constitution of three classes of local authorities—the District Board with jurisdiction over the whole district, a Local Board for each subdivision, and Union Committees for smaller areas where circumstances may indicate the desirability of appointing them. District Boards have been constituted throughout the province, except in Darjeeling and a few remote tracts, and Local Boards have also been formed in almost all districts. The system of Village Unions has not been so extensively developed ; in 1911–12 they existed in 12 districts among those now included in Bengal, and in four districts in Bihar and Orissa. Half the members of the District

* *See* pages 148, 156, 214.

Boards are elected by the Local Boards, where the latter exist throughout a district, and in such areas also two-thirds of the members of each Local Board are normally elected by ratepayers. Election is also laid down as the normal method of appointment to Union Committees. Among the changes introduced by the Act of 1908 were some intended to extend the sphere of action and usefulness of the Union Committees, which were placed in direct subordination to the District Boards, instead of under the Local Boards, and were given important powers in respect of local sanitation, together with the power to levy a small rate. By the Act of 1908 also the diversion of the road cess to purposes other than those enumerated in the Cess Act of 1880 was prohibited, and power was taken to levy tolls on bridges, which could thus be substituted for ferries without loss of revenue. The application of the district fund was at the same time extended in various directions, and District Boards were required, unless specially exempted, to appoint sanitation committees and qualified sanitary inspectors. A clause enabling District Boards to levy a special cess for the purpose of financing tramways and light railways was removed from the Bill in view of public opposition. The working of the District Boards during the decade was, in general, favourably reported on; among other things, road-side tree planting was systematically developed, and expenditure on veterinary objects, first incurred in 1897–8, increased considerably. There was also considerable activity in regard to the development of light railways, and efforts were made by the boards to popularise the fly-shuttle loom. The Local Boards were less successful, and little interest was, generally speaking, shown in elections. Efforts were being made in the closing years of the period under review to improve the position of the Union Committees, and to enlarge their revenues. In 1911–12 the 56 Union Committees in Bengal had a total income of £2,000. In Bihar and Orissa there were only five Union Committees.

Little was spent on sanitation, but it was hoped that progress would result from the offer of the local Government in 1911 to contribute annually one-third of the expenditure incurred by District Boards in any year on the improvement of the local water supply, up to a maximum in each case of £200.

The control exercised through Commissioners over the budgets of the District Boards was relaxed in the last year of the decade, and Local Boards were also given extended powers in the disposal of grants made to them by District Boards.

Eastern Bengal and Assam.—The rural boards of Eastern Bengal continued up to the end of the decade to be regulated by the Bengal Act as it stood before the passing of the amending Act of 1908. The sub-divisional boards which alone exist in Assam were established by executive order to take the place of district committees that for a few years controlled expenditure on roads, primary education, and the district post, under a Regulation of 1879. A certain proportion of the members are tea-planters, elected by the planting community, and there is altogether a strong European element. In 1911–12 out of a total of 316 members 133 were Europeans or Anglo-Indians. As regards their functions and responsibilities, the Assam boards are to be compared with the district rather than with the sub-divisional boards of Eastern Bengal; they were reconstituted in 1906, the total number of members being reduced from 363 to 314, and the number of elected members increased from 132 to 169. Elections were held under revised rules, which ensured the representation of the planting, mercantile, and rural communities. The Assam local boards are reported to be efficient, but labour under disabilities owing to their not being constituted on a legal basis. It is intended to take steps to remedy this defect. One of the most noticeable features of rural administration in Eastern Bengal and Assam was the great increase in the expenditure on waterworks from 1907–08 onwards.

United Provinces.—The North-Western Provinces and Oudh Local Boards Act of 1883 made provision for the appointment of both sub-district boards, consisting to the extent of at least three-quarters of elected members, and District Boards, consisting of some or all of the members of the Local Boards. This Act was repealed and replaced by the United Provinces District Boards Act of 1906, by which the sub-district boards were abolished, power being given instead to District Boards to appoint local committees. In practice the Local Boards had been of little use, and the District Boards had not attained the position in the conduct of local affairs for which they were designed, much of the work that they should have undertaken having fallen on the officers of Government. The new Act conferred on the District Boards wider administrative and financial powers than they had previously enjoyed, and was

(District and Local Boards.)

intended to make local self-government more of a reality. It provides for the election of at least three-quarters of the members of a board, as a general rule. Increased power and responsibility is reported to have led members to take more interest in the work of the boards, and though it will be long before the boards can dispense with official guidance, the stage has been reached at which they are guided and not led. Some defects, no doubt due in part to the relaxation of control, have been noticed in the administration of the boards, and in some cases the finances have not been well managed. The expenditure on water supply and drainage is conspicuously small. A special inquiry was ordered into the administration of education in view of a decrease in the number of schools and scholars in 1909–10 and the apparent absence of progress. The result indicated many shortcomings in the past control of primary education by district boards, the most prominent being a want of continuity in educational policy. The latest reports show that improvements are being made. Some progress was made towards the end of the decade as regards village sanitation, but it is difficult to secure a continuance of interest in sanitary measures. The problem of how to increase the reality of the boards' administration and make a fuller use of local knowledge and interest is under consideration. It is hoped that more extensive devolution of powers to local committees may soon become possible.

Punjab.—The District Boards Act passed for the Punjab in 1883 has remained in force, practically without alteration. It prescribes the establishment of a District Board in each district, but leaves the establishment of Local Boards, as well as the question whether members of the boards are to be elected or nominated, to the discretion of the local Government. Not less than two-thirds of the members of a board must, ordinarily, be non-officials, and not less than a half must be local land-holders. Local Boards were in practice found to be superfluous, and they have been gradually abolished. In 1901–02 there still remained 43 Local Boards, in 11 districts; in 1911–12 there were only 17, confined to 4 districts. Owing to the small average size of districts in the Punjab, it is considered that the District Board is the smallest unit that can usefully be constituted with independent financial powers, and that the proper line of devolution is by the formation of local sub-committees and not of separate sub-district boards. At the end of the decade, 17 of the 29 District Boards, and 13 of the Local Boards, included elected members. The elective principle is not, however, generally appreciated; contested elections are the exception, and nomination is considered a greater honour than election. The working of the boards during the decade was reported to be generally satisfactory, though their active share in the work of administration was in most cases small. It was reported in 1912 that the efficiency of the boards was still dependent on the official stimulus, and that the local rate-payers, as a general rule, took no interest in the elections, though in other respects a considerable improvement in the working of the boards was noticeable. Efforts are being made in several districts to tackle the long-neglected problem of village sanitation.

North-West Frontier Province.—Each of the five districts of the North-West Frontier Province has a District Board, constituted under the Punjab Act. All the members have been nominated by the Chief Commissioner since 1903, before which date half of the members of the Hazara board were elected. The two Local Boards in existence at the beginning of the decade were abolished in 1904. The District Boards were reported to work fairly well on the whole.

Central Provinces and Berar.—The system prescribed by the Act of 1883 for the Central Provinces has as its basis the aggregation of villages into "circles," and in this respect somewhat resembles the Madras system of "unions"; but there are no bodies corresponding to the Union Panchayats. The Local Board area consists of a group of "circles," while for each district there is a District Council. The Local Board includes village headmen elected by the headmen of the villages in the various circles, representatives elected by the mercantile classes and professions, and nominated members, the latter not exceeding one-third of the total number. The District Council is similarly constituted, with the substitution of representatives of the Local Boards for the village headmen. The Berar law, which dates from 1885, directs the establishment of a District Board for each district, and a Taluk board for each *taluk;* at least half of the members of the latter must be elected by local tax-payers, and at least half of the members of the District Board must be elected by members of the Taluk boards from their own number. Material progress in the

working of the rural boards was reported during the decade, though both members and electors remained in many cases apathetic, and efficiency continued to depend to a large extent on official control and assistance. In view of the fact that the District Councils had come to exercise practically the whole of the functions of local self-government, an attempt was made in 1907 to infuse more vitality into the working of the Local Boards by placing definite funds at their disposal and investing them with wider powers of control; and in 1911 increased powers were delegated to both District Councils and Local Boards in regard to the execution of works and control over expenditure. In some districts interest and zeal among non-official members were stimulated. A Local Fund Engineer was appointed for each Division about the end of the decade, with a view to placing the boards in a better position for carrying out public works. Steps were taken in 1912 to delegate to Taluk boards in Berar powers similar to those already granted to Local Boards in the Central Provinces proper.

Madras.—The three classes of boards established in Madras have already been mentioned. The Act of 1884 laid down that there should be a District Board for each district, a Taluk board for each *taluk* constituted under the Act, and a *panchayat* for each "union," a "union" consisting of any village or villages, or any portion or portions thereof, constituted as such by the Local Government. The Taluk boards are constituted, not for individual *taluks*, in the usual sense of the word, but for district sub-divisions, which generally consist of more than one *taluk*. The members of the District Board may be either nominated by Government or elected by members of the *taluk* boards from among their own number; in nearly all cases one-half of the members are so elected. The proportion of nominated official and *ex-officio* members is limited to one-fourth of the total. The members of the Taluk boards were, up to 1909, all nominated. In 1909 the introduction of the elective system was sanctioned for all Taluk boards, with a few exceptions; the proportion of elected members, fixed at the outset at one-third of the maximum strength, was increased to one half in January 1912. The proportion of seats contested has so far not been large. The Union *panchayats* include the headmen of villages included in the Union and nominated members; the provisions of the Act authorising election by the inhabitants of the Union had not up to 1912 been put into force, but measures for the partial introduction of the elective method of appointment have recently been sanctioned. A large majority of the members are non-officials. Panchayats existed throughout the decade in all except two or three districts. The Taluk boards are entitled under the Act to half the proceeds of the taxes levied by the District Boards in the respective *taluks*, and the Union Panchayats receive the proceeds of a house tax (at an average rate of rather less than one rupee per house taxed), which produces some £45,000 a year. The working of all classes of rural boards was reported to be satisfactory on the whole during the period under review. A number of the District Boards took advantage of the provision (peculiar to the Madras Act) authorising the levy of a special cess, at the rate of three pies in the rupee, for the purposes of railway construction. The Tanjore District Board's railway continued to work at a profit throughout the decade, and the Bezwada–Masulipatam line, constructed for the Kistna District Board and opened in 1908, showed equally good results. Other District Boards had railway projects under consideration.

Bombay.—The law in force in Bombay is the Local Boards Act of 1884. It directs the establishment of both District and Taluka boards, and lays down that ordinarily not less than one-half of the members shall be elected, and not more than one-half of the nominated members shall be officials. The elected members of the Taluka boards include one member for each municipal district within the *taluka* containing more than 5,000 inhabitants, elected by the commissioners from among their own number; one member for each of the groups into which the villages in the area are for this purpose divided; and one member elected by the holders of alienated villages. The elected members of the District Board consist of representatives elected by members of the Taluka boards from among their own number, with members representing larger municipalities and alienated villages. The general administration of the boards during the period under review was reported to be satisfactory on the whole, but non-official members, with a few notable exceptions, showed little interest in the affairs of the boards, though the formation of works committees in many districts brought about some improvement in this respect. The success of the boards depends mainly on the energy and attention devoted by district and *taluka* officers.

(District and Local Boards.)

Elections generally aroused little interest. Throughout the decade the rural boards of Bombay spent considerably more than those of any other province on water supply and waterworks.

Port Trusts.

The administration of the larger ports (viz., Calcutta, Bombay, Karachi, Madras, Rangoon, Chittagong, and Aden) is placed by various Acts in the hands of Port Commissioners, who are charged with the provision of suitable dock accommodation and other necessary services to shipping. During the period under review, the Madras Harbour Trust was converted into a Port Trust, with extended powers, by the Madras Port Trust Act of 1905. In the same year a new Rangoon Port Act replaced the Act of 1879, which had become unsuitable in view of the growing requirements of the port. From the point of view of local self-government, the port trusts do not call for detailed treatment. The boards of trustees or commissioners are all under chairmen appointed by Government; but a large proportion of their members represent the commercial communities interested in the respective ports. Such members are, except at Aden, elected by chambers of commerce or similar bodies. In Calcutta and Karachi the municipality is also represented. Except in Calcutta, the elected members are fewer than the nominated members, and at all the ports the large majority of members are Europeans. In 1911–12, out of a total of 88 members, 33 were elected and 16 were Indians, while 40 were officials. There are no Indian commissioners at Rangoon, and no elected trustees at Aden. The revenues that the port trusts administer are mainly derived from dues on shipping and goods, and from fees for services rendered. The trusts are empowered to raise funds by loan to meet capital expenditure. They have wide powers, but their proceedings are subject in a greater degree than those of municipal bodies to the control of Government.

The constitution of the port trusts in 1912, and their income and expenditure in the first and last years of the decade, are shown below:—

—	Income.		Expenditure.		Classification of Members, 1912.			
	1901–02.	1911–12.	1901–02.	1911–12.	Nominated.	Elected.	Europeans.	Indians.
	£	£	£	£				
Calcutta - -	520,021	904,793	493,008	888,028	8	10	16	2
Bombay - -	380,955	590,176	361,054	515,361	9	7	11	5
Madras - -	56,000	116,244	40,635	109,491	7	5	9	3
Karachi - -	104,448	284,187	87,049	202,212	6	5	9	2
Rangoon - -	100,484	244,216	95,035	247,139	8	3	11	—
Chittagong - -	8,514	18,638	8,444	11,829	6	3	8	1
Aden - - -	25,086	34,064	24,869	31,703	11	—	8	3

The capital debt of the trusts at the end of 1911–12 was about £16,689,000, to which Bombay and Calcutta contributed respectively £7,378,000 and £5,636,000. In the case of these two ports charges for interest and sinking fund on loans account for more than one-third of the total expenditure. The total capital debt was more than doubled during the decade, Bombay, Calcutta, Rangoon, Karachi, and Madras all spending large sums on various schemes for providing better accommodation and otherwise improving the ports.

CHAPTER IX.

PUBLIC HEALTH AND SANITATION.

Sanitation has stood with education in the front rank among the subjects that have occupied the attention of the Government of India in recent years.

A detailed Report on Sanitary Measures in India is laid before Parliament annually, and further papers containing very full information on many questions connected with public health and sanitation have recently been presented.* The object of this chapter is to give as briefly as possible a general view of the condition of the public health, and of the progress of medical work and sanitation, during the decade.

Vital Statistics (General Population).—In approaching the discussion of vital statistics, it is necessary to explain that the record of births and deaths, and the causes of death, among the general population is still very far from complete and accurate. Registration, which was first instituted in British India generally 30 or 40 years ago, is now carried out among some 98 per cent. of the total population of British India, but great difficulties have been encountered, and many remain. The figures are collected for the most part through illiterate village watchmen, or town police, who are required to report the simple fact of birth or death and the supposed cause in the latter event. As regards the record of actual occurrences, the error of defect in some areas is still considerable, though there is a general progressive improvement everywhere. The statement of the cause of death leaves even more to be desired; the vast majority die without qualified medical attendance, and reliance has to be placed on the crude impressions of the people, who classify most fatal illnesses marked by a rise of temperature as "fevers." Actuarial analysis of the census returns shows that the recorded totals of births and deaths must be considerably below the actual numbers, so that as registration improves the registered numbers, and the rates, tend to rise. The recorded totals for the decade are shown in the margin, in round figures. The increase of population between 1901 and 1911, according to the census returns, was 12,662,000. As regards calculated death and birth rates, there is a further source of error in the uncertainty as to the actual population except in the years when the census is taken. The ratios for 1901 and 1911 are calculated on the census figures for those years; the ratios in the intervening years, being calculated on the 1901 census figures, become in the ordinary case, where there is an increase of population, unduly high in an increasing degree. The magnitude of the error due to this cause, in the case of the figures now under consideration, varies in different provinces. In British India as a whole the population increased between 1901 and 1911 by 5·5 per cent. In Burma and the Central Provinces the increases were 15 and 16 per cent., while in the Punjab and United Provinces there was a small decrease. The tables below show for 1910 rates calculated on the figures of the 1911 census as well as on those of the 1901 census.

	British India.	
	Deaths.	Births.
1902 -	7,062,000	8,780,000
1903 -	7,818,000	8,726,000
1904 -	7,381,000	9,126,000
1905 -	8,052,000	8,721,000
1906 -	7,852,000	8,448,000
1907 -	8,400,000	8,506,000
1908 -	8,653,000	8,536,000
1909 -	6,998,000	8,298,000
1910 -	7,518,000	8,948,000
1911 -	7,640,000	9,210,000
Total -	77,374,000	87,299,000

For the various reasons mentioned above, the birth and death rates for the general population given below cannot be used as a basis for close comparison, and inferences must be drawn under reserve; but the figures may be taken to show broadly the variations in the general health of the population. The best evidence of the effect of sanitary measures on health is afforded by the much more accurate vital statistics relating to troops and prisoners, which are dealt with separately.

* Cd. 6538 of 1912 and Cd. 6777 of 1913.

(Public Health and Sanitation.)

Ratio of Deaths from all Causes per 1,000 *of Population under Registration.*

——	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910. Calculated on Census Figures of 1901.	1910. Calculated on Census Figures of 1911.	1911.
Bengal - -	31·0	33·4	33·3	32·4	38·5	36·1	37·7	38·6	30·5	33·1	31·9	32·7
Eastern Bengal and Assam* -	27·8	29·0	26·5	25·8	35·1	31·7	29·3	30·7	33·9	33·7	30·2	25·7
United Provinces	30·3	32·5	40·3	34·7	43·3	39·1	43·5	52·7	37·3	38·7	39·4	44·9
Punjab - -	36·1	44·1	49·9	49·1	47·5	36·9	62·1	50·7	30·9	33·3	33·9	34·1
N.-W. Frontier Province -	—	24·4	28·4	28·6	26·8	33·7	35·1	35·8	26·6	26·9	25·1	23·3
Central Provinces and Berar* -	23·5	25·8	35·5	32·1	37·2	43·5	41·7	38·1	33·1	44·9	38·6	34·7
Burma* - -	21·7	21·1	24·1	22·4	24·9	26·8	26·6	28·2	30·2	28·1	24·3	25·1
Madras - -	21·3	20·2	22·2	22·5	21·4	27·4	24·3	26·2	21·8	24·7	22·5	23·1
Bombay - -	37·1	39·0	43·9	41·4	31·8	35·1	32·8	27·1	27·4	30·3	28·6	28·3
Total, British India - -	29·4	31·7	34·9	33·0	36·1	34·7	37·2	38·2	30·9	33·2	31·5	32·0

* Assam only up to 1905. Berar included from 1903, Upper Burma from 1906.

Ratio of Births per 1,000 *of Population under Registration.*

——	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910. Calculated on Census Figures of 1901.	1910. Calculated on Census Figures of 1911.	1911.
Bengal - -	38·6	40·1	39·0	42·6	39·6	37·3	37·7	36·1	37·8	39·7	38·2	40·0
Eastern Bengal and Assam* -	34·0	34·2	35·6	35·6	39·4	37·4	37·0	41·1	40·5	38·0	34·1	34·6
United Provinces	41·3	45·8	46·1	46·7	41·2	40·2	41·2	37·5	33·3	41·0	41·7	43·8
Punjab - -	35·4	43·8	42·9	41·5	44·4	43·7	40·8	41·8	35·1	42·7	43·5	43·9
N.-W. Frontier Province -	29·5	33·6	31·6	34·9	35·4	38·6	32·5	37·3	34·7	38·1	35·2	35·1
Central Provinces and Berar* -	28·8	48·3	45·1	53·2	54·0	51·7	52·5	52·8	51·6	55·4	47·7	49·5
Burma* - -	32·1	31·6	33·5	32·7	34·3	22·4	32·8	34·8	35·9	36·0	31·2	32·6
Madras - -	25·1	28·2	31·2	30·7	32·0	30·9	30·8	32·4	33·1	33·6	30·6	30·4
Bombay - -	25·2	34·2	31·2	35·1	33·1	33·8	33·0	35·7	35·6	37·3	35·2	36·0
Total, British India - -	34·6	39·4	39·0	40·9	39·1	37·4	37·7	37·7	36·6	39·5	37·5	38·6

* Assam only up to 1905. Berar included from 1903, Upper Burma from 1906.

Except in 1907 and 1908, when the death-rate was abnormally high, the number of recorded births was very largely in excess of the number of deaths. The fluctuations in the death-rates are mainly dependent on the figures under the three heads "fevers," cholera, and plague, which are shown in the margin. It is to be noticed that more than half of the total number of deaths are attributed in the returns to "fevers." When reference is made to fever in India, malarial fever is generally implied, but the registration returns, as already mentioned, bring all kinds of diseases within the scope of this favourite diagnosis. A careful inquiry made recently in one area showed that the deaths recorded in the village registers under this head included cases, among others, of melancholia, senility, and drowning. It may nevertheless safely be said that malaria in India, apart from its indirect influence on the death-rate, directly causes more deaths than any other disease. According to a recent estimate, it may be held directly responsible for about a million deaths in India every year, and the noticeable increase in the death-rate from "fevres"

Death-rates per 1,000, British India.

——	Fevers.	Plague.	Cholera.
1901	18·7	1·0	1·2
1902	19·2	2·0	1·0
1903	19·8	3·1	1·4
1904	18·2	4·2	·9
1905	19·7	4·2	2·0
1906	19·7	1·3	3·0
1907	19·8	5·2	1·8
1908	24·0	·5	2·6
1909	19·8	·6	1·1
1910	19·2	1·8	1·9
1911	17·6	3·1	1·5

in 1908, which there was reason to attribute mainly to malaria, must, according to this estimate, have brought the total in that year to something like two millions. The Punjab and the United Provinces were on that occasion the chief sufferers, and this fact is reflected in the high death-rates returned by those provinces in 1908. In 1907, on the other hand, the high general death-rate was chiefly attributable to plague. In this case also the Punjab suffered very severely; plague accounted for nearly half of the total number of deaths in the province, and raised the provincial death-rate for the year to a figure much higher than any other in the above table.

Two further points may be noticed in regard to the statistics of deaths. Firstly, the recorded death-rate is generally somewhat higher in towns than in rural areas, and sometimes in individual cases very much higher. Secondly, the mortality among infants is very high. The recorded deaths among infants below the age of one year, taking British India as a whole, were, during the period under review, about 22 per cent. of the recorded births. This heavy mortality may be ascribed to the immaturity and ignorance of the mothers, and to the physical labour the majority are called upon to perform, to the lack of competent midwives, and to the exposure of infants to all the influences of an insanitary environment. The practice of female infanticide may now be considered a negligible quantity in the sum of the causes in operation. The recorded rates vary considerably from province to province, the extremes in 1911 being 246 per 1,000 births in the United Provinces and Central Provinces, and 166 per 1,000 in Bombay. In Bombay City, where a relatively very high ratio of mortality among infants has always been recorded, the ratio in 1911 was 382·5 per 1,000, as compared with 435·6 per 1,000 in 1910, and the results reported of the operations of the special nursing staff for confinement cases among the poorer classes were distinctly encouraging.

Special endeavours have been made in various directions to provide remedies against infantile disease and mortality. Thus it was recorded in the United Provinces in 1910 that the Committee of the Dufferin Fund had made arrangements for the training of midwives who might be employed by municipalities to attend poor women, and that leaflets in the vernaculars giving simple directions for the feeding and care of infants were being widely circulated throughout the province. In Burma a Society for the Prevention of Infantile Mortality exists. A representative of the Government of India was deputed to the Congress on the protection of infants at the breast that met at Berlin in 1911, and his report, with a number of important papers and publications, has since been under consideration.

With the factors affecting the birth-rate it is unnecessary to deal here, beyond remarking that, generally speaking, the changes in material circumstances and general health that cause the death-rate to move in either direction tend to produce a movement in the opposite direction in the birth-rate. The point is illustrated by a comparison of the death-rates in the United Provinces and the Punjab in 1908 and 1909 with the birth-rates in 1909 and 1910. The generally high Indian birth-rate is to be attributed mainly to the large proportion of married women.

Malaria.—The heavy death-rate from malaria, referred to above, only partially represents the evil effects of that disease. The cases in which malaria is contracted without fatal results greatly outnumber the deaths, and a death-rate of a million a year represents an enormous amount of suffering and a great economic loss by the prostration of labourers, often at the time when labour is of most value. Epidemic malaria also brings about a great reduction in the number of births during the year following the epidemic. The problem of malaria has received great attention in India in recent years. It is not out of place to notice here that the world in general owes a great part of the knowledge upon which efficient aad precise measures against malaria are based to the action taken and the discoveries made in India. In the first place, the cinchona enterprise of the Government of India, initiated more than fifty years ago, has been the chief means of bringing about such a fall in the price of quinine as to render practicable the policy of making the drug available to the poorest peasants throughout the world; secondly, India was the first country in which an endeavour was made to mitigate malaria among the poor by the plan of selling single doses of quinine for the smallest coin in general daily use among the people; and, thirdly, to an officer of the Indian Medical Service (Sir Ronald Ross) belongs the credit of the discovery of the mode by which the disease is contracted and spread, and therefore the discovery of the precise measures by which its eradication is possible. During the earlier years of the decade, the energies of local Governments and munici-

palities were very fully occupied in dealing with plague; but various steps were taken in different provinces to popularise and extend the use of quinine, and improvements in drainage and anti-mosquito operations were undertaken in some places with the same end in view. An extensive experiment in mosquito reduction was inaugurated at Mian Mir in 1902, and carried on for several years, but with no very conclusive results. In Bengal a special inquiry into malaria was instituted in 1906.

An impulse was given to the work against malaria by the very severe epidemic in the Punjab and United Provinces in 1908. In October 1909 an Imperial Malaria Conference, including representatives from all provinces, among them a number of non-officials, was summoned at Simla by the Government of India. The proceedings of the Conference, which dealt with malaria from all points of view, were reprinted in one of the Parliamentary Papers referred to above [Cd. 6538 of 1912]. The measures now being taken are based on the recommendations of the Conference. The Conference considered that the first step in a satisfactory and widespread endeavour to deal with malaria in India should be the establishment of a permanent organisation comprising a Central Scientific Committee, Provincial Committees, and a General Committee consisting of the members of the Central Committee and delegates from the Provincial Committees. An organisation of the kind proposed has been established, and work has been systematically carried on in the different provinces. The General Committee met in November 1910 and again in November 1911.

The deliberations of the Conference showed that a first essential in the campaign against malaria is a complete knowledge of all the circumstances connected with the disease in different localities, and, to secure this it was arranged, early in 1910, that each province should be given an opportunity of training a number of officers and subordinates in modern methods of malarial research. To this end there was established at Kasauli a Central Malaria Bureau, containing a museum, laboratory, and reference library, and at Amritsar a house was secured which serves as a permanent laboratory for malarial investigation and teaching. Classes of instruction have been held at the latter place. The next step was the appointment in the different provinces of specially trained officers and subordinates whose sole duties are in connection with malaria. These officers are provided with adequate working staffs, and tour from place to place investigating the disease and assisting in its prevention. Detailed local investigation has necessarily constituted a large part of the duty of these officers at the outset. The necessity of undertaking such investigations before spending great sums of money on schemes designed to effect the improvement of malarial conditions was clearly shown by one report submitted in 1911, that in which Dr. Bentley gave the results of two years' investigation of malaria in Bombay City. This report indicated that in the particular circumstances of Bombay City carefully devised measures for the destruction of the dangerous species of mosquito might very probably result in the complete eradication of malaria at a moderate cost. Reference is made on page 142 to the action being taken on the report.

Other recent investigations also have pointed to the probability that, given preliminary scientific inquiry, effective anti-mosquito measures may in suitable places not prove so costly as was at one time supposed. The Malaria Conference at Bombay in November 1911 passed a series of resolutions pointing out the importance of instituting anti-mosquito measures wherever practicable in addition to making free use of quinine both for purposes of prophylaxis and treatment, and it was decided to carry out such measures in certain selected towns. Meanwhile it is recognised that no one measure can be suitable for all the conditions that favour the prevalence of malaria, and that a combination of several measures may be required as local circumstances may indicate. Quinine prophylaxis applied to a free population is difficult to carry out in the thorough way necessary for success, but under the peculiar conditions of the Indian populace arrangements for the treatment by quinine of those sick from malaria are regarded as a matter of primary importance from the points of view of saving life, of preventing suffering, and of diminishing the possibilities of infection. The sale of quinine in small packets through the post office and other agencies made considerable progress during the decade. The pice packet now contains 10 grains; a system of distribution of larger packets, the unit being a "treatment" instead of a dose, has recently been adopted in some parts. Provision is also made for the gratuitous distribution of quinine where necessary, especially during epidemic years. Thus more than 7,000 lbs. of quinine was distributed free in the United Provinces in 1908. Both the amount of quinine issued from the two Government factories and

the amount imported have increased steadily. Taking the sum of the two, the total consumption of quinine in India may be put at about 186,000 lbs. in 1911–12, as compared with 65,000 lbs. in 1901–02. The education of the people is another most important anti-malarial measure. Efforts are made in various ways to secure the co-operation of the public, without which there is little hope of bringing the campaign against malaria to a successful conclusion.

Plague.—The total number of reported deaths from plague since the disease broke out at Bombay in August 1896 is over eight millions. In view of the fluctuations in mortality, and of the very different degrees in which the various provinces have suffered, a detailed statement will be of interest. The table below shows the deaths up to the end of 1912.

Plague Mortality, British Provinces and Native States.

——	1896–1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.*	Total.
British Provinces:												
Bengal - -	153,491	65,680	75,436	126,084	59,619	83,602	15,948	11,779	46,584	75,681	60,221	774,125
United Provs.	50,380	84,499	179,082	383,802	69,660	328,862	22,878	38,394	158,074	332,301	114,941	1,762,873
Punjab - -	189,286	205,462	396,357	334,897	91,712	608,685	30,708	35,655	135,483	175,345	35,487	2,239,077
N.-W. Frontier Province -	4	49	1	3	41	1,547	563	1	30	243	2	2,484
Burma - -	9	9	3	3,692	8,637	9,249	6,752	6,946	7,741	6,060	3,071	52,169
Central Provs. and Berar -	6,578	51,514	42,866	12,706	18,121	37,774	6,236	19,216	28,961	27,938	19,536	271,446
Eastern Bengal and Assam -	—	28	—	6	74	8	—	1	46	27	–	190
Ajmer-Merwara	3	48	158	2,480	68	13	74	5,176	6,517	346	*	14,883
Coorg - -	—	44	25	—	—	2	26	2	9	57	9	174
Madras - -	16,711	13,291	20,125	5,788	898	2,872	3,358	3,844	4,867	15,185	7,017	93,956
Bombay - -	578,923	281,269	223,957	71,363	51,525	93,609	27,345	24,319	25,043	100,399	33,024	1,510,776
Total - -	995,385	701,893	938,010	940,821	300,355	1,166,223	113,888	145,333	413,355	733,582	273,308	6,722,153
Native States:												
Total - -	268,651	181,183	205,983	128,319	56,366	149,669	42,592	33,475	99,250	113,291	32,780	1,311,559
Grand total -	1,264,036	883,076	1,143,993	1,069,140	356,721	1,315,892	156,480	178,808	512,605	846,873	306,088	8,033,712

* In 1912 the figures for the smaller native states are included with those for the British provinces in which they lie; the figures for Ajmer-Merwara, on the other hand, are included with those for the native states of Rajputana. The figures for Bengal include 58,236 deaths in Bihar and Orissa, and those for the Punjab 16 in Delhi.

The figures for 1911 were high, and heavy mortality continued into the spring of 1912. In the summer, when the number of deaths normally falls to a minimum, the mortality was lower than for many years past, a fact which gave ground for hoping that the ravages of the disease as it increased towards its maximum in the spring might remain on a correspondingly small scale. This expectation, it may be mentioned, has to some extent been realised. The total number of deaths in the first five months of 1913 was 145,100, as compared with 263,900 in the same months of 1912.

In the case of plague, as in that of malaria, the world owes much to the work done in India: firstly, the discovery and provision of an effective mode of protection in inoculation; secondly, the attainment of exact knowledge regarding the part played by rats in the epidemiology and endemiology of the disease; and thirdly, the discovery of the mode of infection and conveyance by means of the rat-flea, which has led to the abandonment of many useless and very troublesome measures previously considered essential, and has rendered it possible to indicate precisely the particular methods necessary for the avoidance and prevention of the disease.

When plague first appeared in India, nothing was known as regards the mode by which it was contracted and spread, and all that could be done was to attempt to eradicate it by the means adopted in European countries for dealing with epidemic disease. With this object very strenuous efforts were made, but success was not attained, and sometimes the measures led directly to the misfortunes they were designed to avert. It soon became clear that it was impossible to deal effectively with the epidemic in the absence of help from the people themselves, and a policy of persuasion and assistance was substituted for the more rigorous measures, but this also failed to prevent the extension of the disease. In the meantime considerable progress had been made in the study of the epidemiology of the disease, and it was felt that if the remaining gaps in our knowledge could be filled in, greater precision might be given to the measures that it was possible to adopt. Steps were accordingly taken in 1904 to establish a Plague Research Commission, with a view to undertaking

(Public Health and Sanitation.)

a more complete inquiry into the etiology of the disease, and since April 1905 the scientific problems presented by plague have been continuously under investigation by the Commission, which works in India under the direction of an Advisory Committee in this country nominated for the purpose by the Royal Society and the Lister Institute. As a result of the establishment of this Commission, satisfactory replies had been found by May 1907 to most of the questions concerning the epidemiology and mode of spread of the disease. The main conclusions arrived at were that epidemic bubonic plague in man is directly dependent on epidemic plague in rats; that the vehicle of contagion between rat and rat and between rat and man is the plague-infected rat-flea; that bubonic plague is not directly infectious from man to man; and that the life of the plague bacillus outside the bodies of men, animals, or fleas, is of short duration. In the meantime the value of anti-plague inoculation had been conclusively proved, and in August 1907 the Government of India were able to make definite recommendations relating to the following subjects:—(1) the prevention of contact between man and infected rats and rat-fleas; (2) the destruction of rats; (3) other measures for excluding rats from dwellings and for limiting their numbers; (4) evacuation of areas in which plague is prevalent; (5) provision of facilities for inoculation; (6) measures for the extirpation of plague from localities in which it persists throughout the period of abatement, and for preventing its spread from them. In the light of the knowledge and experience now acquired, it is possible to deal effectively with the disease when control can be established over the sanitary conditions, and in the case of the Indian Army, and in limited areas such as jails, remarkable success has been attained. But attempts to establish effective control over large areas would involve too great an interference with the habits, prejudices, and sentiments of the people, and the Government of India have continued to act on the view that compulsion should be avoided, and that the end aimed at should be to persuade and assist the people to take of their own accord such measures as seem most likely to prevent the spread of the disease. The preventive measures that are at present being taken are based upon the findings of the Commission, and are known to be those which alone can prove effective; but, as their success depends entirely upon the extent to which they find favour with the people, the results in different parts of the country are by no means uniform. The principal measures adopted are the temporary evacuation of quarters in which plague is prevalent, inoculation with the prophylactic fluid, and the systematic destruction of rats. The diminution of the food-supply to which rats have access, and the possibility of such improvement in the structure of houses as shall render them reasonably rat-proof, are also kept in view. Where resort is had to evacuation, Government is ready to supply money and material to provide temporary dwellings and to alleviate the discomfort and distress that must accompany evacuation of quarters.

In Madras, measures of rat destruction, evacuation of infected areas, and inoculation are supplemented by measures for the segregation of patients and contacts, the disinfection of infected houses and effects, and the surveillance for seven days of persons coming from infected areas. In Bombay inoculation, evacuation, and rat destruction are the chief operations carried out. In Bengal, evacuation is the most popular of all measures. In the United Provinces, evacuation is not unpopular in rural areas and the inhabitants of towns sometimes agree to adopt it, but the people are averse from inoculation. It is believed, however, that if their confidence can be gained by treating them for ordinary diseases their prejudices against inoculation may in time be overcome, and to this end a number of travelling dispensaries have recently been established with very good results. In the Punjab a similar system of travelling dispensaries has been in existence since 1907, and it is reported that inoculation is gradually coming into favour. In this province evacuation is unpopular; rat destruction is carried out in cases where plague persists during the quiescent season, and in other places as soon as the disease appears. In Burma the measures advocated at the close of 1910 were evacuation of small towns and villages, inoculation of those who would accept it, and the systematic trapping of rats. In some towns strenuous efforts for the destruction of rats by a method known as "driving" have been adopted, but it is said that the plan leads to large recurrent expenditure and is only a temporary expedient.

As in the case of malaria, the education of the people in elementary hygiene and domestic sanitation, with a view to securing their whole-hearted co-operation in the campaiga against the disease, is a primary condition of success. The question of

the prevention of plague is chiefly one of domestic hygiene, turning upon the fact that the rat is a domestic animal in the houses of many Indians.

The Plague Research Commission has continued its labours, taking up various important problems in connection with the epidemiology of the disease and the mode of persistence of the epidemic, including those presented by the relative immunity of certain areas. Plague is so local in its visitations that general statistics are likely to prove misleading. Many parts of India have been, as is partially shown by the figures given above, almost entirely free from its ravages, and in the greater part of the country the outbreaks cannot be described as having been severe or disastrous. On the other hand, general statistics tend to conceal the severity of the distress caused by the disease in particular districts. In some parts of the Punjab and the United Provinces the mortality has been so severe as to disorganise the labour market and to affect the level of wages. The reasons for this uneven incidence are at present somewhat obscure. The mortality in Eastern Bengal and Assam has been at no time appreciable, largely, it is believed, because the habits of the people and the structure of their houses are such that the latter are comparatively free from rats, while in the Madras Presidency and in Burma the epidemic has never reached very serious dimensions. The results of recent experiments suggest that the comparative immunity of Madras may be due to the climatic conditions in the Presidency, which appear to be unfavourable for the carriage of infection.

The efforts made to discover an effective anti-plague curative serum have hitherto been unsuccessful.

Cholera.—The death-rate from cholera is highest as a rule in Bengal and Eastern Bengal and Assam, the highest rate of the decade—5·3 per 1,000—being recorded from Bengal in 1908. In 1906 there was heavy mortality also in the United Provinces, Central Provinces, Madras, and Bombay. The total number of reported deaths in British India in each year of the decade is shown in the margin; the death-rates have been given above. Apart from contaminated water, it appears that factors of great importance in the spread of the disease in India are (*a*) convalescents discharged while still infective; (*b*) healthy persons who have been in contact with cholera cases and have acquired the infection without showing any signs of the disease; (*c*) flies; and (*d*) the personal habits of the people. A fresh series of investigations into the problems connected with cholera was started in 1911 under the auspices of the recently constituted Indian Research Fund.

Deaths from Cholera.	
1902	224,078
1903	309,967
1904	192,327
1905	439,950
1906	690,521
1907	408,102
1908	591,725
1909	239,231
1910	430,451
1911	354,005

Small-pox and Vaccination.—The reported deaths from small-pox in British India in each year are shown in the margin. By comparison with the figures for plague and malaria, the mortality is small; the range of variation in the death-rate is much the same in all provinces. The highest death-rate of the decade, in the larger provinces, was 1·4 per 1,000 in the Punjab in 1908, in which year the total mortality and the death-rate were higher than for many years past. For detailed information regarding vaccination, reference may be made to the annual Report on Sanitary Measures in India. Vaccinations are performed mainly by the agency of a special department, which includes some 6,000 vaccinators, with a small number of European and Indian supervising officers. Vaccination is compulsory in all municipalities (and in some villages and "notified areas") in Madras and in the United Provinces, in a large majority of the towns in Bengal and Burma, and of the municipalities in the Central Provinces, in more than half of the towns in Bombay and in less than a fourth of the towns in the Punjab. In rural areas vaccination is made available, but is almost everywhere optional. The total number of successful vaccinations was in most years of the decade a little over eight millions; for 1901–02 and 1911–12 the totals were 7,414 000 and 8,805,000. Re-vaccinations constitute only a small proportion of the total, and the great bulk of the primary vaccinations are of children under the age of six years, more than a half being of children under one year. Estimating the birth-rate at 40 per mille, the percentage of infants protected in 1911–12 was 48·0, as compared with 32·8 in 1901–02. The figure for 1911–12 was higher than any previously recorded. Glycerinated or lanolinated calf lymph is in most cases used. In several provinces all vaccinations are performed with such

Deaths from Small-pox.	
1902	115,253
1903	93,039
1904	54,734
1905	70,424
1906	109,581
1907	103,988
1908	170,694
1909	101,152
1910	51,315
1911	58,535

lymph. In the United Provinces, where the practice of arm-to-arm vaccination has been extensively followed, it is being steadily replaced by the use of calf lymph. The practice of inoculation is condemned by Government and is prohibited where the Vaccination Acts are in force, and also in some other parts under special enactments. It is still, however, followed in some parts. It was reported from Burma in 1911–12 that it was the cause of much of the small-pox in that province.

Reference may be made here to some additions during the decade to the list of Vaccinator Acts, which includes a number of enactments applying to different provinces. The United Provinces Vaccination Law Amendment Act of 1907 amended the Vaccination Act of 1880, in the United Provinces, so as to make it applicable to "notified areas" as well as to municipalities and cantonments, power being thus given to make vaccination compulsory in such areas. Two Acts were passed in 1908 and 1909 in Burma. The first, the Burma Prohibition of Inoculation and Licensing of Vaccinators Act, gave the local Government power to prohibit inoculation in any area (including rural areas, to which the Vaccination Act of 1880 cannot be applied), the intention being to extend the prohibition as an efficient vaccinating staff became available, and made provision for the licensing of vaccinators throughout the province. The second, the Burma Vaccination Law Amendment Act, extended the existing provisions for compulsory vaccination, with a view especially to the danger of the dissemination of small-pox by migratory coolies. The Bengal Vaccination (Amendment) Act of 1911 made a number of minor changes in the law, one of which reduced the period for the vaccination of children born within an area to which the Act applies from one year after birth to six months after birth.

Other Causes of Death.—The only other causes of death separately shown in the returns are dysentery and diarrhœa, respiratory diseases, and injuries. The statistics of deaths under the first two heads are not of much value as an indication of the prevalence of the respective diseases; they showed during the decade an average of about 260,000 deaths annually from dysentery and diarrhœa, and about 200,000 from respiratory diseases, the corresponding death-rates being about 1·2 and ·9 per 1,000. About 100,000 deaths are attributed each year to injuries, leaving something like 1,700,000 a year to the account of "other causes." Reported deaths from snake-bite average about 22,000 a year, while wild animals (chiefly tigers, leopards, and wolves) are responsible for about 2,200 a year.

Health of the Troops.—In the case of the Army and the jail population, vital statistics are complete and sanitary science has full play. Taking first the death-rates (per 1,000) alone, the figures below show the enormous improvement brought about within the last half century.

—	1801–30.	1831–56.	1861–65.	1870–79.	1881–91.	1891–1900.	1901–05.	1906–09.	1910.	1911.
European troops -	84·6	57·7	26·9	19·3	14·2	16·2	12·2	8·7	4·7	4·9
				1871–80.						
Native troops -	—	15·6*	—	20·3	13·8	12·2	10·0	6·5	4·9	4·5
Jail population (all classes, including subsidiary jails) -	—	70·7*	—	46·4†	1881–94. 33·8	1895–1900.‡ 29·1	20·8	20·9	18·9	18·3

* Figures for slightly different periods.
† Omitting famine years 1877–78 in Madras, when mortality was exceptional.
‡ Andamans omitted from 1895.

As regards the health of the troops, remarkable progress was made during the ten years immediately under review, as is more fully shown by the detailed figures given below.

The table shows the chief causes of sickness and death for each class of troops. As regards admissions to hospital, the reduction in the rates is partly due to changes in the methods of statistical record and of treatment. The system of "treatment in barracks" introduced in 1903 for mild cases considerably reduced the numbers admitted to hospital. In the case of the Indian troops especially, the treatment of men as out-patients prevents the admission rate for fevers from being an accurate indication of the prevalence of disease. There is, however, no doubt as to the diminished prevalence of venereal diseases among the European troops, which is

	Rates per 1,000 of Average Strength.													
	European Troops.								Native Troops.					
	Admissions into Hospital.			Constantly Sick.	Deaths.			Invaliding.		Admissions into Hospital.		Constantly Sick.	Deaths.	
	Fevers (chiefly Malaria).	Venereal Diseases.	Total, all Causes.		Enteric Fever.*	Abscess of the Liver.	Total, all Causes.	Venereal Diseases.	Total.	Fevers (chiefly Malaria).	Total, all Causes.		Pneumonia.	Total, all Causes.
1902	284	281	1,078	66	4·29	1·85	14·68	5·12	37	292	718	27	3·71	11·16
1903	285	247	1,033	63	4·19	1·29	13·05	3·00	29	260	662	25	3·06	10·04
1904	221	198	900	57	3·76	1·36	10·83	2·80	35	209	603	24	2·32	8·46
1905	178	154	834	52	2·99	1·18	10·05	1·16	21	195	607	23	1·90	8·09
1906	251	117	871	51	3·19	1·52	10·43	1·86	28	297	683	23	1·56	6·57
1907	204	90	756	46	2·77	1·01	8·18	1·40	26	243	629	22	1·99	6·27
1908	332	70	839	46	2·76	·80	9·78	1·07	16	285	674	23	2·20	7·41
1909	273	68	717	40	1·58	·48	6·25	·48	9	204	584	21	1·88	5·62
1910	181	59	576	32	·63	·48	4·66	·35	8	195	573	21	1·34	4·89
1911	140	53	525	29	·33	·46	4·89	·19	7	139	516	20	·98	4·48

* Including paratyphoid fever, which was not differentiated in the returns previous to 1910.

shown also in the figures of invalidings. The steady decrease in venereal disease, which began about 1896 and is one of the most remarkable features of the health statistics during recent years, is attributed to a number of causes, among which may be mentioned, as being the most important, the efforts of regimental and other officers to occupy the spare time of the men in healthy pastimes, to make the regimental institutes attractive and comfortable, and to influence the men to avoid contracting these diseases; the better education and higher moral tone now existing among soldiers generally; the increased knowledge of the danger of these diseases, leading to greater care as regards personal prophylaxis; less indulgence in alcohol; and the more thorough treatment now carried out in all cases. Malaria, though it is the chief cause of sickness in both European and Indian troops, is responsible for only a small number of deaths—the numbers for 1911 being 6 in the European and 55 in the Indian Army.

The fact that the total admissions and death-rates in 1904 were at the time the lowest on record for both European and Indian troops emphasises the improvement effected since, of which the death-rates give unquestionable evidence. The death-rate for European troops in 1911 compares very favourably with that of a similar age-distribution in European countries. Some causes of a general nature to which much of the improvement must be attributed are brought to notice in the following passage, written with special reference to the European Army, from the report of the Sanitary Commissioner with the Government of India for 1909 :—

"If the annual rates of the last decade are compared with one another it will be apparent that the reduction during the last three years is remarkable not more for its degree than for its suddenness; it would seem as if a previously unknown or untried hygienic measure of great power had been brought into use. There is considerable evidence that such a supposition could be verified—that it is indeed the case that a measure untried until quite recently has been a very potent cause of the reduction in the rates. The measure referred to is personal or individual hygiene. It will not be denied that until quite recent years all sanitary effort for bettering the health of European troops in India had to be classed under the heading of public hygiene—the individuals concerned were viewed as irrational beings who could not or would not understand and profit by knowledge of methods by which they could help themselves to guard against infectious diseases. During the last few years a great change of opinion in this connection has occurred, and while we know that the old ideal of military hygienists was to free the surroundings of the soldiers from all infectious germs, we may suppose that the new ideal is to inculcate such knowledge into the soldiers that it is of little consequence whether their surroundings are free from germs or not. The annual reports by medical and sanitary officers contain the evidence that justifies this view. We read that in many stations combatant officers have associated themselves with medical officers in a common endeavour to teach the soldiers how to guard against enteric fever, malaria, and venereal disease. As regards enteric fever, we learn that leaflets are issued to the men, that lectures are always followed by a great increase in the numbers of those who come forward to be inoculated, and that a knowledge of the principles underlying this method of protection has enabled the men better to realise its benefits. As regards malaria, we know that in a number of regiments officers and men have combined to employ a part of the regimental funds for the provision of mosquito curtains, that large numbers of men of their own accord employ quinine as a prophylactic regularly and in an intelligent manner, and that where mosquito destruction operations are concerned few are more enthusiastic in the campaign than the average British soldier. As regards venereal disease, we are aware that the lectures and talks to the men regularly given by combatant and medical officers have been probably of all the measures ever tried the most effective in bringing about the remarkable

(Public Health and Sanitation.)

reduction that has occurred. We read also that increase of knowledge has made men feel that to contract venereal disease is disgraceful to themselves and to their regiments, and we learn that a knowledge of the principles and results of the method of continuous and long treatment now adopted is much appreciated, and that as a consequence it happens not infrequently that men who have contracted syphilis extend their term of service in order to obtain the full course of treatment. Finally, we are aware that among the many factors that have tended towards the diminution of disease generally and of certain diseases in particular, the influence of the widespread increase of temperance among European soldiers in India has been of great importance. These remarks are sufficient to indicate that the seeds of personal or individual hygiene are not being sown on barren ground when they are spread among the European army in India, and that the plan which from its recent adoption may not inappropriately be termed 'the new hygiene for European troops' has proved to be a reasonable and efficacious method of preventing disease."

The working of the factors here mentioned in the case of venereal diseases has already been referred to. The fall in the death-rate from abscess of the liver, which has coincided with a steady decline in the number of admissions to hospital for alcholism, stands on much the same footing. In the case of enteric fever, the disease was the subject of much research work at the Central Research Institute from the time of its establishment, and much of the credit must be given to the introduction of new methods with a firm basis of knowledge derived from investigation, important features being the segregation of convalescents and bacillus carriers, and anti-typhoid inoculation. The death-rate in 1910 was then the lowest on record, and in 1911 there were among the whole of the European troops only 170 cases and 22 deaths (in addition to 104 cases of paratyphoid fever, with 2 deaths). One of the results of the great improvement of the health of the European troops has been to reduce considerably the number of men annually drafted to India, and as the new arrivals are young soldiers very susceptible to disease, the reduction of their number tends in its turn to react favourably on the sickness and mortality rates.

The death-rate among the Indian troops has in the past been lower than that of the European Army, the year 1910 so far furnishing the only exception to this rule. It is to be noted, however, that the two rates are not altogether comparable. Many native soldiers die while on sick leave or on ordinary furlough, and are not then included in the returns. The inclusion of these deaths would raise the rate appreciably—from 4·48 to 6·78 in 1911.

It is to be noticed that the number of deaths from plague averaged during the decade only about 2 a year among European troops and about 58 a year among Indian troops; for cholera the annual average numbers of deaths were 24 and 37 respectively; and for small-pox less than 3 for each class of troops. In the last four years of the decade the deaths from plague among Indian troops averaged less than 20 a year.

Health of the Jail Population.—In comparing the death-rates of prisoners and of the general population, allowance must be made for the very different circumstances of the two communities. Prisoners are under certain disadvantages, but these are much more than balanced by advantages. They are drawn chiefly from the lower and least resistant classes, and are exposed to the depressing influences of jail life; but they are well housed and clad and abundantly fed, cared for in health and skilfully tended in sickness. The age-constitution of the jail population also is favourable to a low death-rate. The prison death-rate, therefore, ought to be lower than that of the general population, as it was throughout the period under review. At the same time the health of prisoners must always be affected to some extent by the condition of the people, owing to the continuous flow into the jails of large numbers of the poorest and lowest classes. This point is illustrated by the figures for 1908 in the marginal table, which gives the chief figures for each year, excluding those for subsidiary jails and lock-ups, and from 1905 also those for the Andamans, where only a small proportion of the convicts live in ordinary prison conditions. The returns

	Rates per 1,000 of Average Strength (excluding Subsidiary Jails and Lock-ups).						
	Admissions into Hospital.		Constantly Sick.	Deaths.			
	Fevers (chiefly Malaria).	Total, all Causes.		Dysentery.	Tubercle of the Lungs.	Pneumonia.	Total, all Causes.
1902	379	913	35	5·13	4·25	3·38	24·85
1903	371	889	35	3·73	3·85	3·62	21·38
1904	354	841	32	3·58	3·64	2·80	19·91
1905*	193	647	27	3·01	3·19	2·28	19·23
1906	219	658	27	3·25	3·21	2·55	19·27
1907	197	624	27	2·57	2·74	2·90	17·72
1908	217	646	29	4·67	3·76	3·24	24·17
1909	184	618	28	4·20	3·72	3·60	22·85
1910	145	549	25	3·46	3·41	2·57	19·29
1911	126	538	26	2·91	3·65	2·37	18·44

* Figures for the Andamans excluded from 1905.

from the Andamans show a much higher admission rate for fevers, and also a higher total death-rate, than those for the jails of India and Burma, taken as a whole. In 1908 all the conditions influencing the health of the prisoners were extremely unfavourable. The number of persons admitted to the jails rose greatly; many of the prisons were overcrowded, and a large proportion of the newly-admitted prisoners were in a bad state of health owing to the effects of scarcity and malarial infection. The death-rate was, nevertheless, one that would have been considered low ten years earlier.

The chief causes of sickness and death are those shown in the table. The opinion is widely held that tubercular disease, particularly tubercle of the lungs, is increasing in India, especially in the towns; but the statistics of the decade for India and Burma as a whole do not indicate any important change in the prevalence of tubercle of the lungs in the prisons. In all provinces strenuous efforts are made to ensure the segregation of tuberculous prisoners, and special open-air wards have been constructed in a number of jails. Cholera and plague, the scourges of the general population, scarcely affect the prison statistics, and a high degree of success has been attained in preventing the spread of other communicable diseases. During the ten years under review the total numbers of deaths in the jails from cholera and plague averaged about 63 and 17 a year respectively. Small-pox is, as in the case of the troops, negligible as a cause of death, the average number of deaths being about 6 a year.

Medical Services and Institutions.—The bulk of the Indian population still rely very largely on the ministrations of *vaids* and *hakims* practising eastern systems of medicine, but there is a growing body of Indians trained on western lines at the medical schools and colleges, who, besides filling posts in the public medical services, have been increasingly successful in private practice. Steps have been taken by Government to encourage the growth of the independent medical profession in India, and an important stage in advance has recently been marked by the passage of the Bombay Medical Act, 1912, which became law shortly after the end of the period under review. The Act, which applies to the Bombay Presidency, provides for the first time in India for the constitution of a Medical Council and the registration of qualified practitioners, without, however, placing any direct restriction on the practice of *vaids* and *hakims*.

The medical services, from which appointments under Government are generally filled, include the Indian Medical Service, and civil and military Assistant Surgeons and Hospital Assistants. The Indian Medical Service is primarily a military service, but a large proportion of its members hold civil appointments, subject to the liability to recall to military duty. In each province the administration of matters medical and sanitary is under the control of the local Government, whose principal advisers are an Inspector-General of Civil Hospitals and a Sanitary Commissioner. The district arrangements are generally under the charge of a medical officer styled the Civil Surgeon, who, besides giving professional attendance to the superior Government officers, superintends medical institutions and, subject to the general authority of the Collector, all matters connected with the health of the population.

Hospitals and Dispensaries.—Medical institutions were established at an early date in the Presidency towns for the relief of the natives as well as for the treatment of the Company's servants; but in the country generally progress was for a long time slow, and the main development has taken place during the last thirty or forty years. Since the creation of municipalities and district boards, local authorities have taken an ever-increasing share in the provision of medical relief. Hospitals and dispensaries in British India are divided into six classes, as shown in the margin. Some changes were made in the classification of hospitals during the decade, so that the detailed figures for 1901 are not altogether comparable with those for 1911. Taking all classes of hospitals and dispensaries together, the second marginal table shows the accommodation available and the number of persons treated in the same two

Hospitals and Dispensaries.	Number of Institutions open.	
	31st Dec. 1901.	31st Dec. 1911.
State—Public	275	258
State—Special:		
Police	291	278
Forests and surveys	4	7
Canals	—	38
Others	9	57
Local fund	1,576	2,207
Private, aided	495	257
Private, non-aided	517	709
Railway	235	317
Total	3,402	4,128

years. The total number of patients treated at State-Public, local fund, and private-aided hospitals and dispensaries in 1911 was made up of 15,370,880 men, 5,473,677 women, and 7,351,245 children. Reference may be made here to the great efforts that have been made to afford the women of India medical relief in a form acceptable to them. Many hospitals have been established for their exclusive use, and special attention has been paid to the education of lady doctors and subordinates. Much has been done in this connection by the "National Association for supplying Female Medical Aid to the Women of India," founded by the Countess of Dufferin in 1885. In 1911 there were 128 State-Public, local fund, or private-aided hospitals and dispensaries for women only, with 2,895 beds, as compared with 109, with 1,992 beds, in 1901. The corresponding figures for non-aided hospitals are not available. The table below gives detailed figures for 1901 and 1911 :—

—	1901.	1911.
Number of beds :		
For men - -	24,976	31,630
For women -	10,410	14,019
Indoor patients -	499,916	602,130
Outdoor patients -	25,384,268	34,488,627

—	1901.					1911.				
	Institutions.			Patients treated.		Institutions.			Patients treated.	
	State-public, Local Fund, and Private-aided.	State-special and Railway.	Private non-Aided.	Indoor.	Outdoor.	State-public, Local Fund, and Private-aided.	State-special and Railway.	Private non-Aided.	Indoor.	Outdoor.
Burma - - -	119	108	4	56,187	994,591	188	75	1	71,973	1,580,528
Eastern Bengal and Assam* - -	125	40	6	12,642	787,848	373	88	88	34,584	4,535,185
Calcutta - -	17	—	—	25,989	253,615	15	2	2	28,983	310,689
Rest of Bengal -	550	95	45	65,049	3,988,114	360	71	126	69,797	4,560,384
United Provinces -	364	91	30	75,520	4,017,003	379	126	46	90,891	4,833,055
Ajmer-Merwara -	7	—	—	1,239	55,913	7	1	—	957	67,446
Punjab - - -	245	55	24	64,695	3,290,124	302	60	12	84,101	4,512,078
N.-W. Frontier Province - -	29	1	7	9,488	499,442	49	27	6	20,241	992,044
Baluchistan - -	16	—	—	4,191	167,259	25	7	4	5,839	300,332
City of Bombay -	14	3	25	19,423	394,489	24	—	15	19,089	304,513
Rest of Bombay Presidency -	224	52	309	55,816	3,570,755	311	74	309	55,699	3,905,705
Central Provinces and Berar - -	151	44	44	23,643	2,187,540	167	67	54	18,834	2,160,886
City of Madras -	14	—	—	20,359	235,164	14	—	—	24,163	262,208
Rest of Madras Presidency - -	465	49	22	64,297	4,896,643	500	98	43	74,620	6,085,418
Coorg - - -	6	1	1	1,378	45,748	8	1	3	2,359	78,156
Total - -	2,346	539	517	499,916	25,384,268	2,722	697	709	602,130	34,488,627
Total number of patients treated by—										
State-public, local fund, and private-aided institutions - - - -				366,629	20,777,099		—		463,646	27,732,156
State-special and railway institutions -				87,307	1,193,787		—		89,688	2,030,376
Private non-aided institutions - -				45,980	3,413,382		—		48,796	4,726,095

* Assam only in 1901.

The hospitals and dispensaries depend for their income very largely on Government and local bodies. Figures are available only for the State-public, local fund, and private-aided institutions. Taking these as a whole, their total income in 1911 was £870,000, made up as follows : Government contribution, in the form of salaries or otherwise, £310,000; from local funds, £232,000; from municipal funds, £154,000; subscriptions from Europeans, £19,000; subscriptions from Indians, £48,000; interest on investments, £15,000; miscellaneous receipts, £91,000.

Towards the end of the decade a system of travelling dispensaries was introduced in the Punjab and the United Provinces with excellent results. In 1911 there were

in the United Provinces 32 travelling plague dispensaries and 12 travelling malaria dispensaries, which served the double purpose of carrying surgical and medical assistance to villages in the interior and of overcoming prejudice against plague inoculation and popularising that measure, as well as the use of quinine and other useful medicines. The system, first introduced in the United Provinces in 1910, was an extension of, and improvement upon, arrangements that have existed in the Punjab since 1908.

Lunatic Asylums.—The proportion of insanes among the Indian population is, according to the census returns, very low. At the census of 1901 only 66,000 persons were returned as insane in a population of 294 millions. The census of 1911 showed an increase of nearly 22 per cent. in the number of insanes. The majority are harmless and are looked after by their friends; only a small proportion, consisting in general of destitute wanderers and dangerous persons, find their way into the lunatic asylums. Lunatic asylums are under Government management, and were during the decade administered under an Act of 1858, which made provision for the admission and release of insane persons and the control of the institutions by visitors. The Act was repealed at the end of the decade by the Indian Lunacy Act, 1912, which brought the law up to date, and, among other things, added provisions penalising the detention of lunatics in asylums in contravention of the Act and the detention for payment of lunatics or alleged lunatics in unlicensed institutions. The number of persons admitted and re-admitted to the asylums showed some increase, being 1,797 in 1911, as compared with averages of 1,286, 1,595, and 1,706 in the periods 1897–1901, 1902–06, and 1907–11 respectively. The total number in asylums at the end of 1911 was 6,052, as compared with 4,758 at the end of 1901. In nearly half of the cases in asylums the cause of insanity is unknown; of the remaining half, about a fifth are attributed to the use of hemp drugs, about one-sixteenth to alcoholism, and less than 1 per cent. to the use of opium. The policy followed in recent years has been to establish central asylums and to reduce the number of smaller institutions. In 1911 there were three asylums in Bengal, two in Eastern Bengal and Assam, three in the United Provinces, one each in the Punjab and Central Provinces, two in Burma, three in Madras, and seven in Bombay.

Leper Asylums.—Asylums are maintained in a number of places for the segregation and treatment of lepers. A Lepers Act, passed in 1898, gave legal power to deal with pauper lepers and to prohibit lepers from following certain callings and from using public tanks and wells. The 1911 census returns showed 109,094 lepers in the whole of India, as compared with 97,340 in 1901 and 126,361 in 1891.

Pasteur Institutes.—The first Indian Pasteur Institute for the treatment of persons bitten by rabid animals was opened at Kasauli, in the Punjab, in 1900. It is under private management, but is aided by Government. To enable persons bitten by rabid animals at a distance from Kasauli to receive treatment in time, a second Pasteur Institute on similar lines was opened at Coonoor, in Madras, in 1907, and the establishment of a third, in Burma, has been sanctioned since the end of the decade.

The number of patients treated at Kasauli in 1911 was 2,268. Of the total number 43 died of hydrophobia, 14 who died more than fifteen days after completion of the course being recorded, according to custom, as "failures." The total number of persons treated from 1900 up to the end of 1911 was 13,580, deaths numbering 225, and "failures" 81.

At the Pasteur Institute of Southern India, Coonoor, 940 persons were treated during the year ending on the 29th February 1912. Of the total number 8 died of hydrophobia.

Laboratories.—A general scheme for providing facilities for the scientific study of tropical diseases was formulated about 1900. It contemplated the establishment of a central laboratory, which would be devoted to research and to the preparation of protective vaccines and curative sera, and of provincial laboratories at the head-quarters of the principal local Governments, to be occupied mainly with ordinary bacteriological work. Some provincial laboratories were in existence at the end of the preceding decade, and the Central Research Institute was established, experimentally, at Parel in 1901. The Central Research Institute was moved to Kasauli in 1904, and by about the same time fully-developed provincial laboratories were established in Madras and Bombay; there were also the anti-rabic Institutes at Kasauli and Coonoor, the former of which serves as a provincial bacteriological laboratory. A small staff of specialists

(mostly officers of the Indian Medical Service) was sanctioned for these laboratories and constituted as a Bacteriological Department. In the other provinces temporary arrangements were made for the discharge of the functions of provincial bacteriologist, the officers having in all cases laboratories of some sort within reach. The grants made by the Government of India from the opium surplus of 1911–12 included one of 4 lakhs (£27,000) towards the establishment of a School of Tropical Medicine in connection with the Medical College, Calcutta, and one of 2 lakhs for the Government Laboratory, Bombay.

During 1911 the staff of the Central Research Institute, Kasauli, conducted inquiries in connection with dysentery, malaria, and *kala azar*. Six classes of instruction in clinical bacteriology and technique were held. The demand for curative sera and vaccines continued to expand, and it was not possible to supply all requirements. Large numbers of pathological specimens were examined.

The Bombay Laboratory is the headquarters of plague investigation and prepares all anti-plague vaccine used in India. The report for 1911 showed a greatly increased demand for the vaccine, the output of which was 1,211,170 doses. Research work was carried on also in regard to guinea-worm disease and leprosy. It is proposed to enlarge the scope of the work of the laboratory and to found a school for the teaching of tropical medicine and hygiene. At the King Institute of Preventive Medicine, Madras, various inquiries were carried on during 1911, including a systematic examination of the water supplies of the Presidency. The growing demand for therapeutic vaccines necessitated an addition to the staff.

The Indian Research Fund.—In 1911 the sum of 5 lakhs (£33,000), out of the surplus opium revenue, was set aside as an endowment for research into epidemic diseases in connection with the Central Research Institute. It was hoped that this sum might be largely augmented by private subscriptions. An Indian Research Fund Association was constituted, and a good deal of work has already been undertaken. Fresh investigations into kala azar and cholera have been inaugurated, and an officer was deputed, at the expense of the fund, to study yellow fever in the regions where it is endemic, with a view to taking steps to prevent its introduction into India.

A further grant of 6 lakhs (£40,000) was made to the Central Research Fund from the opium surplus of 1911–12.

It has been decided to devote to research and anti-malarial projects £33,000 a year from Imperial revenues, commencing in 1913–14.

Sanitation.—The history of the sanitary departments in India goes back for about fifty years. During that period great improvements have been effected in the sanitary condition of the towns, though much remains to be done; but the progress of rural sanitation—which involves the health of the great bulk of the population—has been slow, and incommensurate with the thought and labour bestowed on the subject. "The reason lies in the apathy of the people and the tenacity with which they cling "to domestic customs injurious to health. While the inhabitants of the plains of "India are on the whole distinguished for personal cleanliness, the sense of public "cleanliness has ever been wanting. Great improvements have been effected in many "places; but the village house is still often ill-ventilated and over-populated; the "village site dirty, crowded with cattle, choked with rank vegetation, and poisoned "by stagnant pools; and the village tanks polluted, and used indiscriminately for "bathing, cooking, and drinking. That the way to improvement lies through the "education of the people has always been recognised."* Sanitation and education are dealt with by the same department of the Government of India, and the transfer of these subjects in 1910 to the newly-constituted Education Department may be noted here as a step facilitating the fuller consideration of sanitary questions. In recent years such questions have taken an increasingly prominent place in the proceedings of Government, and the more enlightened classes have awakened to their importance. The first All-India Sanitary Conference was held at Bombay in November 1911, and the second, with a greatly increased number of delegates, including a number of non-officials, at Madras in November 1912. At the latter the president in his opening address was able to report that since the first conference ideas and interests had been quickened on all sides, and that there were "signs of a "sanitary awakening in India, of the dawning of an age of greater attention to public "health."

* "Imperial Gazetteer of India," Vol. IV., Ch. XIV.

(Public Health and Sanitation.)

For detailed information on the subjects of sanitation and sanitary progress in India, reference may be made to the Parliamentary Papers referred to at the beginning of this chapter, which include the proceedings of the two Conferences just mentioned. It is only possible here to review briefly some of the most important points.

Provision of Funds.—Reference may be made in the first place to the all-important question of the provision of funds, on which progress necessarily depends to a great extent. The greater part of the present expenditure on sanitary measures is in the hands of municipalities, whose financial resources are limited. In recent years, as was shown in Chapter VII., grants have in many cases been made by Government to assist in the execution of schemes of sanitary improvement. The expenditure shown in the accounts of the Government of India under the head "Medical Charges" (which does not include expenditure by local bodies from their separate revenues) increased from £715,565 in 1901–02 to £1,155,490 in 1911–12, while that under the sub-head "Sanitation and Vaccination" rose from £68,817 to £286,910; but these figures do not represent the whole of the expenditnre by Government on sanitary measures, some being brought to account under the head "Civil Works." A substantial addition was made to the available resources in 1908–09, when the Government of India distributed £200,000 among the provinces for expenditure on sanitary improvements, with special reference to the prevention of plague; the grants then made were intended to be recurring grants-in-aid, and provision has been made accordingly for increased outlay in each year since. A further substantial grant was made in 1911, when £380,000 out of the surplus opium revenue of 1910–11 was similarly distributed among the provinces. This grant was non-recurring, and was intended to provide for initial or capital expenditure on large schemes of sanitary development. A large part of it went to local bodies for the improvement of drainage and water supply.

A similar non-recurring grant of £333,000, also from surplus opium receipts, was distributed in 1912. Taking into account the special grants to Bombay and Madras referred to below, and other smaller grants, the Imperial grants for sanitation in 1911 and 1912 amounted altogether to £1,210,000 and the grants for research work to £100,000.

Subsequent grants do not fall within the province of this Statement; but it may be mentioned that a non-recurring sanitary grant of £1,000,000, the bulk of which will be devoted to meet pressing demands for the improvement of urban sanitation, was made from the surplus of 1912–13. It was decided also to distribute among local Governments a recurring grant of £267,000 a year, commencing with the year 1913–14.

Sanitary Administration.—A quotation from the Report of the Plague Commission of 1898, describing the administrative arrangements in force at the beginning of the decade, was given in the last decennial number of this Statement. Briefly, they were as follows:—The office of Sanitary Commissioner with the Government of India was combined with that of Director-General of the Indian Medical Service. Each of the larger provinces had a Sanitary Commissioner, a member of the Indian Medical Service, but in some provinces the appointment was combined with that of Inspector-General of Civil Hospitals. There were a varying number of Deputy Sanitary Commissioners. The Civil Surgeons, except in Bombay, undertook the duties of health officers in districts, where generally no subordinate establishments were separately retained for sanitary duties, though the establishments employed on vaccination were utilised also in sanitary work. Outside the Sanitary Department there were under the different local Governments Sanitary Boards, including various officials and non-officials, which considered large measures of sanitary improvement before they were undertaken. In the Presidency towns and a few of the larger municipalities separate Health Officers were employed; but generally municipalities relied on the services and advice of the Civil Surgeon.

The Plague Commission criticised the existing organisation of the Sanitary Department, and put forward suggestions, including a scheme for the formation of an Imperial Sanitary Department. In 1904, in announcing the separation of the office of Sanitary Commissioner with the Government of India from that of Director-General, Indian Medical Service, the Government of India expressed the view that lines of advance should now be worked out in consultation with local Governments. At the same time, they emphasised the paramount need for caution in dealing with sanitary reform, and referred to the administrative and financial considerations that made rapid progress impossible. A further stage was marked by a circular letter to local Governments in December 1907, in which the Government of India, considering that the time had now

come when an endeavour should be made to realise the expectations of substantial progress entertained in 1904, put forward a scheme for the more complete organisation of sanitary appointments.

The proposals included the provision of at least one whole-time health officer (of the Indian Medical Service, or of similar standing) for every town with over 100,000 inhabitants, and of a medical officer of health (of the civil assistant surgeon class) for towns with between 20,000 and 100,000 (officers appointed being required in both cases to have special training in public health), and of a larger subordinate staff of sanitary inspectors. These proposals applied only to towns. The Government of India set aside for the time being "the thorny question of sanitation in rural areas." Local Governments were invited to submit their views on these suggestions, after consulting official and non-official opinion, and they took steps accordingly to secure for the questions raised the very careful consideration in the light of local circumstances and ways and means that they obviously required. Meanwhile the creation of separate appointments in Burma and the Central Provinces in 1907 and 1909 respectively completed the provision of whole-time Sanitary Commissioners for the provinces. The circular letter of 1907 also included suggestions for the further development of the provincial Sanitary Boards.

The further history of the question of the improvement and extension of the sanitary services is contained in despatches included among the papers recently laid before Parliament.*

The Government of India reported in January 1912 that the scheme outlined in 1907 had been on the whole favourably received, and that they had now indicated to local Governments the general lines on which they should frame their final schemes. Suggestions were made as to the constitution and functions of the Sanitary Boards, and the proposals of certain local Governments for the creation of new posts of Deputy Sanitary Commissioner (eight in all) were accepted. The scheme put forward at the end of 1911 contemplates the appointment of health officers of two classes, for larger and smaller towns respectively; for the first class, the qualifications laid down are the possession of a registrable medical qualification and, for the present and until proper arrangements can be made in India for post-graduate study, a British diploma in public health; for the second class, a medical training is regarded as desirable but not essential; in this case general qualifications are laid down, which are to be supplemented by an approved course of training in public health. The Government of India have expressed the view that all municipal health officers should be debarred from private practice. They have further recommended to other local Governments that they should make arrangements for the appointment of sanitary inspectors on the lines already in force in Madras, where every municipality is required to employ at least one trained inspector. To enable local Governments to take action on these lines without delay, the Government of India offered, subject to the sanction of the Secretary of State, to assist those local Governments who were prepared to improve their sanitary services on the lines indicated, but could not find the money from their provincial revenues, with grants from Imperial revenues calculated approximately on the cost of the additional Deputy Sanitary Commissioners *plus* half the cost of municipal health officers for those towns in which local Governments are of opinion that such officers should, for the present, be appointed. This proposal, and the proposals for the creation of additional posts of Deputy Sanitary Commissioner, were sanctioned by the Secretary of State.

Schemes for the reorganisation of the Sanitary services on the lines laid down are maturing in the various provinces. When they are brought into force, the number of Deputy Sanitary Commissioners will have been increased from 13 to 26, the number of trained first-class Health Officers from 7 to 29, and of second-class Health Officers from 7 to 92.

It is intended that the agency to be employed for the future development of the sanitary administration shall, as far as possible, be Indian. Indians who possess the prescribed qualifications will be eligible for all appointments, including those of Deputy Sanitary Commissioner; and it is hoped that it will be possible before long to make arrangements for post-graduate study in India, and thus further to facilitate the attainment of the necessary qualifications by Indians in their own country.

The office of Sanitary Commissioner with the Government of India, which had been amalgamated with that of Director-General, Indian Medical Service, since 1880,

* Cd. 6538 of 1912, pp. 198-218.

was, as mentioned above, again made a separate appointment in 1904, so as to give the Government of India the services of a whole-time sanitary expert. On the occurrence of a vacancy in March 1911, the Director-General, Indian Medical Service, was appointed to hold charge also for the time being of the duties of the Sanitary Commissioner. After a reconsideration of the whole question, with special reference to certain disadvantages arising from the complete separation of the two appointments, it was decided to revive the separate appointment with somewhat altered status and functions. The new arrangements were laid down in a Resolution of the 19th August 1912 (reprinted in Cd. 6538). The Sanitary Commissioner now became subordinate to a certain extent to the Director-General, Indian Medical Service, and was at the same time relieved of certain duties. These arrangements enable the officer holding the post to tour freely and regularly throughout India with a view to co-ordinating the lines of development, to inspecting works of sanitation actually in progress, to advising on projected schemes, and generally to disseminating the knowledge acquired in the different provinces.

Progress of Sanitation.—The more important sanitary operations in the Presidency towns during the decade are noticed in the following paragraphs. As regards other towns, and rural areas, the subject must be dealt with briefly and in outline only. Much detailed information will be found in the Parliamentary Papers already referred to.

Calcutta.—At the beginning of the decade the Calcutta Corporation had in hand large schemes for the drainage of the suburbs and for the substitution of a continuous for an intermittent water supply. The drainage scheme was practically completed in 1909, since which date extensive drainage operations have been in progress in what is known as the "Fringe Area." An important change was made in the water-supply schemes in 1908, when it was decided to substitute gravitation for pumping as the method of distribution and to build an elevated reservoir at Tallah. This was completed early in 1911, and the laying of the new mains was finished shortly afterwards. Water from the reservoir was turned into the new mains on the 16th May 1911. The year thus witnessed the successful completion of the scheme for the improvement of the supply of filtered water at a cost of over £400,000, and marked an epoch in the history of the Calcutta Water-works. The completion of the scheme resulted in a large increase of pressure, and the daily average supply rose from 28 to 34 million gallons. Even so, owing to the large amount of waste, it was impossible to inaugurate a continuous supply; but the prevention of waste was engaging attention, and it was hoped that it might be possible to make the supply continuous, at least as a tentative measure, during 1912–13. There is also a supply of unfiltered water, which is used for flushing the drains and watering the streets.

During the decade systematic progress was made with the improvement of "*bustees*"—*i.e.*, areas containing collections of huts—and towards its close the whole question of taking steps to deal adequately with the congested areas in Calcutta, which had been the subject of prolonged discussion, was finally dealt with, on lines similar to those followed in Bombay thirteen years earlier, by the Calcutta Improvement Act of 1911. This measure, one of the first importance, made provision for the constitution of a Board of Trustees with power to undertake schemes of improvement by opening up congested areas, laying out or altering streets, providing open spaces, demolishing or constructing buildings, &c. The Board consists of 11 trustees, a chairman and four others nominated by the local Government, four members of the Corporation (including the chairman), and members of the Bengal and Bengal National Chambers of Commerce elected by those bodies. The Board derives its funds from contributions from Government and the Calcutta Corporation, and from a duty on transfers of property, a terminal tax on passengers, and an export duty on jute. The Improvement Trust came into being on the 2nd January 1912.

Bombay City.—As was shown by the figures quoted in Chapter VIII., the Bombay Corporation continued during the period under review to spend large sums on water supply and drainage, and various new works were carried out. During 1911–12 great progress was made with a high lands drainage scheme, and with storm-water drains. The waterworks, which draw their supply from the Tansa, Vehar, and Tulsi lakes, were maintained in a state of efficiency, and the work of renewing and enlarging the water mains was carried on. The total amount of water carried into the city averaged about 30 million gallons a day.

(Public Health and Sanitation.)

The most important sanitary work of the decade was that carried out by the Bombay Improvement Trust. The Trust was constituted in 1898, the Board of Trustees consisting of 14 members, of whom four are elected by the Corporation, and one each by the Chamber of Commerce, the Port Trustees, and the Millowners' Association, the remainder being *ex-officio* or nominated members. The task allotted to it was that of regenerating the city by constructing new thoroughfares, demolishing insanitary areas, erecting sanitary quarters for the labouring classes—a large proportion of whom live in *chawls* or tenement houses, often built in narrow and dirty lanes and very inadequately lighted and ventilated—and developing valuable sites for building. Its chief sources of revenue are an annual contribution from the municipality and the income from valuable property assigned to it by Government. The Trustees applied in 1910 for further financial assistance, to enable them to include in their programme various works recognised as essential to the improvement of the city. They received a grant of £333,000 from the Government of India's surplus of 1910–11, and the question of supplementing their resources still further has since been under consideration.

The Trust has effected improvements in various directions, by clearing and laying out afresh congested quarters, by levelling and draining swampy areas, by planting trees, and by building *chawls* of a better type, which at the end of 1911–12 provided accommodation for over 17,000 of the poorest classes. A new departure was made in 1909–10 by training all inspectors and peons employed on Trust estates to find out mosquito-breeding places and destroy the larvæ. It was reported on the completion of some of the earlier improvement schemes that "these areas are " quite unrecognisable to those who knew them when only ten (in some parts five) " years ago they were densely covered with insanitary ill-arranged houses along " narrow, winding, and unventilated lanes," and residents have borne witness to the great improvement in the healthiness of localities, notoriously malarious a few years ago, resulting from the draining and levelling work done by the Trust. The expenditure on capital account up to the end of 1911–12 was over £3,000,000.

Among the sanitary measures taken by the Corporation, the inception of a scheme for the control of malaria deserves special notice. After a very severe outbreak of the disease in 1907, the question was referred to an expert, who reported in 1911 that malaria-carrying mosquitos in Bombay bred to a large extent in wells, and that the conditions were specially favourable for the suppression of the disease by measures directed against the mosquito. His recommendations as to the steps to be taken to this end were accepted generally, and it was decided accordingly to strengthen the health establishment of the city, and to take powers by the amendment of the Municipal Act to deal with private wells in the interior of houses and other like breeding-grounds of the mosquito.

A very large reclamation scheme, for adding to the limited building area by reclaiming extensive areas on Back Bay, has been under the consideration of Government.

Madras City.—The sanitary condition of the City of Madras has hitherto been unsatisfactory, the most serious defects being the lack of proper drainage in a large part of the city and a very deficient water supply. Good progress was made towards remedying these defects in the latter years of the decade. A special engineer was engaged in 1907, and a complete scheme for a new water-supply system was worked out by 1911, while a comprehensive drainage scheme was in an advanced state of preparation. The water-supply scheme is estimated to cost altogether £426,000, of which £75,000 had been expended up to the end of 1911–12; the cost of the drainage scheme is roughly estimated at £800,000, and £130,000 had been spent by the end of the decade. The Corporation received a grant of £167,000 in aid of its waterworks and drainage scheme from the Government of India in 1912. A beginning has also been made with the task of admitting air and light to the congested *paracheris* (collections of huts) of George Town and other densely populated quarters. The first model *paracheri*, built with the object of providing accommodation for persons evicted under the "congested area" schemes, was completed in 1908–09 and speedily filled, and other model dwellings have since been completed. It may be noticed, finally, that nearly 1,500,000 rats had been destroyed up to the end of 1911–12. Madras City has been practically free from plague.

Other Towns.—Some idea of the progress of urban sanitation during the decade may be gathered from the information given in Chapter VIII. regarding the expenditure

of municipalities on water supply, drainage, and conservancy. Information as to particular schemes has been given year by year in the Report on Sanitary Measures and in the annual numbers of this Statement. Full information as to the number of towns at present provided with water-supply and drainage systems is not available in a collected form. It was reported early in the decade that more than 80 municipal towns were furnished with water-supply systems, many of them on a large scale, and constructed in accordance with the most approved modern methods. Further information as to some provinces may be gathered from the proceedings of the Sanitary Conferences, and the reports of the provincial Sanitary Commissioners for 1911. In Madras Presidency there were in that year 19 towns, besides Madras City, with a piped water supply; in Bombay 17 towns, besides Bombay City, had a properly distributed piped supply, and about 30 more had an imperfect supply capable of considerable improvement; in the Central Provinces 13 towns had waterworks of various types. The Bengal report showed 17 municipalities with waterworks, including five supplied from the Calcutta Waterworks; the Punjab report 13 in which important schemes for water supply had been introduced within the last thirty years, and eight with a pumped water supply, and the United Provinces report also eight with pumping arrangements. Most of the works in question have been completed within the last twenty years, and many of them within the last ten.

The number of towns with adequate systems of sewage or drainage is very limited. In the whole of Madras there were in 1911 only two modern systems—in Madras City and Ootacamund; in Bombay only Ahmedabad and Karachi, besides Bombay City, had drainage installations on modern lines, while the sewerage of Poona was in progress; in the Central Provinces no large drainage schemes had been completed, though a sewage scheme was being carried out at Nagpur and a surface drainage scheme at Wardha. In Bengal, Patna and Muzaffurpur were provided with systems of drainage about twenty years ago, and a number of schemes have been carried to completion in smaller towns within the last few years. In the Punjab and United Provinces a considerable number of municipalities completed drainage works during the decade. In Burma no municipality except Rangoon has any kind of sewage system.

The hygienic conditions of Allahabad, Cawnpore, and Lucknow have been considerably improved since 1908 by the aid of trust funds then established, with the municipal boards as trustees, for the purpose of opening out congested areas and making broad roads. Progress has been especially marked in Lucknow.

Full information as to schemes of water supply and drainage in contemplation is given in the appendices to the report of the first All-India Sanitary Conference, which had for its special object the consideration of definite schemes of urban sanitation.

Rural Sanitation.—As will be seen by reference to the figures given in Chapter VIII., district and local boards, which have charge of sanitation in villages and small towns, have hitherto been able to spend little on water supply and drainage works, though the amount has increased considerably in recent years. Under the head "sanitation and vaccination" the rural boards of Madras spend some £60,000 a year, but the Sanitary Commissioner for that province in his report for 1911 writes that "under "all heads—water supply, drainage, conservancy—sanitation in rural areas is still in "a most primitive condition . . . . in only 1 per cent. of the 43,994 towns and "villages is anything like conservancy attempted, and not a single town or village "of any size has up to date been provided with either a protected water supply or "a drainage scheme." In other provinces rural boards spend much less under the head "sanitation," though in Bombay and Bengal they spend a great deal more on water supplies. Notes on the subject of rural water supplies contributed by the provincial Sanitary Commissioners to the Sanitary Conference of 1912 show how little is done in rural areas, generally speaking, to guard against contamination. The Conference expressed the view that impure water-supply is one of the principal causes of sickness and mortality in the rural areas of India, and that the most hopeful line of action would appear to lie in the encouragement of a more extended use of tube-wells and pumps.

In Bombay, the United Provinces, and the Central Provinces there are Village Sanitation Acts, making provision for carrying out sanitary measures and for recovering the cost from the inhabitants by levying a rate or otherwise. In Bombay the Act was applied, and sanitary committees appointed, in 286 villages in 1911, as compared with 292 in 1901. Reporting officers expressed the opinion that the

(Public Health and Sanitation.)

committees, as a rule, did very little useful work, though the desire for sanitary reform was not wanting in every case. "Many spend a large portion of their "available means on lighting the streets, which, no doubt, is more favourably "regarded by the inhabitants than sanitary improvements would be." The Central Provinces Act was in force in 40 villages. It was reported that in some cases the villagers were enthusiastic over the prospect of improving their sanitation and managing their affairs. No report on the working of the United Provinces Act is available, but the Sanitary Commissioner's report refers to the fact that opposition, due to ignorance, is frequently met with. A system of village sanitary note-books, containing a permanent record of the sanitary history of the villages, in which remarks are recorded by inspecting officers, was introduced in 1895, and has been used in some provinces with considerable advantage.

CHAPTER X.

FINANCE.

Administration of Finances.*—The financial administration of India, and the collection and expenditure of the revenues, are, in common with other branches of the government of India, subject to the control of the Secretary of State, acting in association with the Council of India in the manner provided by the Government of India Act, 1858, and further special provision is made for the control of expenditure by a section of the Act which lays down that no grant or appropriation of any part of the revenues of India may be made without the concurrence of a majority of votes at a meeting of the Council. In practice the Government of India and the local Governments are respectively authorised to sanction new items of expenditure of an ordinary description within limits laid down in each case in standing rules approved by the Secretary of State in Council. These limits were extended during the period under review. Any expenditure not falling within them requires the specific sanction of the higher authority. Thus, under the existing rules, the sanction of the Secretary of State in Council is required, for example, to the creation of any new permanent appointment which would ordinarily be held by a gazetted civil officer recruited in England, and to the raising of the pay of such an appointment; to the creation of any other permanent appointment the salary of which exceeds £640 a year; or to a revision of permanent establishment involving additional expenditure of more than £3,333 a year.

As has been mentioned in Chapter IV., the Executive Council of the Governor-General includes a member whose special function it is to take charge of the Finance Department and to consider questions coming before the Council from the financial point of view. The Secretary of State's Council also includes members appointed by reason of their special experience of finance.

Provincial Finance.—The whole administration of the finances in India was formerly undertaken by the Government of India, but a policy of decentralisation was initiated in 1870 and has since been extensively developed. In 1871 Lord Mayo introduced the system of making over to the local Governments certain heads of expenditure—of which the more important were police, education, jails, medical services (in part), roads, and civil buildings. To meet these charges, there were assigned to the local Governments the departmental receipts under the corresponding heads, and also a fixed grant, the local Governments being left to provide for any additional expenditure by the exercise of economy and the imposition, where necessary, of local taxes. In 1877–82 further heads of expenditure, including (in most provinces) land revenue, general administration, and law and justice, were transferred to provincial management, and a share in growing revenues was given in addition to a fixed grant, thus allowing a margin, which might be increased by careful management, with which to meet growing expenditure. The settlements then made were subject to revision once in five years. The objects aimed at were to give the local Governments a strong inducement to develope their revenues and practice economy in their expenditure, to obviate the need for interference on the part of the supreme Government in the details of provincial administration, and at the same time to maintain the unity of the finances in such a manner that all parts of the administration should receive a due share of growing revenues required to meet growing needs, and should bear in due proportion the burden of financial difficulties.

Quasi-permanent Settlements.—Important changes were made in the system of provincial settlements during the period under review. The arrangement by which the settlements were revised every five years (the revisions usually resulting in the resumption of a certain amount of revenue for Imperial purposes) had the drawback of provoking periodical controversies between the Government of India and the local Governments, and of stimulating hasty and possibly wasteful expenditure by the latter during the closing years of a settlement. It was accordingly decided in 1904 to assign to the local Governments more permanent shares in the divisible revenues raised in their territories, and settlements on this basis were effected in the years 1904 to 1907. These settlements were intended to be "permanent," in the sense that they should not be subject to revision at the end of fixed periods. The power of

* The terms of reference to the Royal Commission on Indian Finance and Currency, appointed in April 1913, are given on page 427.

(Finance.)

revision was necessarily reserved, but the intention was that it should be exercised only in the event of the variations from the initial relative standards of revenue and expenditure in any province, over a substantial term of years, being so great as to result in unfairness either to the province itself, to other provinces, or to the Government of India, or in the event of the Government of India being confronted with the alternatives of either imposing additional taxation or seeking assistance from the provinces.

Permanent Settlements.—In 1911 the policy underlying the earlier changes was carried a step further. Almost before the series of *quasi*-permanent settlements was concluded, a complete revision had been found necessary in the case of the United Provinces and a substantial readjustment had taken place in Madras, while large subsidies had to be made to several provinces. The settlements were now again revised, and put on a basis intended to be in the fullest practicable degree permanent, a further large conversion of fixed assignments into growing revenue being effected. It was recognised that widespread famine would still have to be met, when necessary, by special arrangements for the succour of a distressed province from Imperial funds; and that, on the other hand, the Government of India might at times be compelled to call on the provinces for assistance in case of a great war or in a grave financial crisis. But apart from these wholly special emergencies, the new settlements are intended to be rigid and permanent, subject to the possibility of further conversions of fixed assignments into shares of growing revenues. It is no longer open to a local Government to run through its balances, build up a heavy overdraft on the general balances of India, and then have to be set on its feet again by Imperial benefactions. Ordinarily provinces will not be allowed to budget for a deficit or to reduce the provincial balance below a prescribed minimum; if in special circumstances an overdraft is allowed, the local Government will have to take a short loan from the Imperial Exchequer and pay interest on it, and in the last resort the propriety of raising special provincial taxation will have to be considered. On the other hand, the settlements do not debar the provinces from sharing in any surplus that the Government of India may be in a position to distribute in a good year; while the Government of India will no longer consider it necessary to exercise the same minute control over the budgetary arrangements of the provinces as has been the practice in the past.

The whole subject of provincial finance was dealt with by the Government of India in an important Resolution published on the 18th May 1912, from which the following passage may be quoted as indicating their general view of the new arrangements. "These arrangements," they remark, "represent, in the opinion of "the Government of India, a decided advance in the path of decentralisation. They "place a greater responsibility on local Governments for the stability of their "provincial finances, while at the same time investing them with wide independence. "The arrangement aims at securing a clear division of duties and liabilities; and "the Government of India trust that it will now be followed, on the part of each "local Government, by a careful examination of the scale of expenditure which "now prevails, particularly in the Roads and Buildings Branch of the Public Works "Department. The Government of India have now conducted such an examination "into their own finances, with a view to economy and retrenchment; and they think "it would be well if local Governments should now do the same, bearing in mind "the rigidity of the new arrangements and the grave responsibility for keeping the "growth of provincial expenditure at a ratio which shall in no circumstances be "greater than the growth of provincial resources."

The working of the new settlements was in 1911–12 satisfactory, except in the case of Burma, which received a special supplementary grant. The reconstitution of Bengal necessitated the framing of new settlements for the three new provinces. It was impossible to attach to these the same degree of permanence as to the other recent settlements, and temporary settlements were accordingly made, in the hope that on the expiration of three years it would be possible to gauge the needs of the new provinces with sufficient accuracy to justify the conclusion of permanent settlements.

The system of provincial settlements is applied only to the major provinces. The North-West Frontier Province and Baluchistan have what are known as *quasi*-provincial settlements, but their revenue and expenditure are shown in the accounts as Imperial.

Certain heads of revenue and expenditure have remained in the hands of the Central Government. The revenue retained by the Government of India for its own purposes and for meeting the expenditure incurred by the Secretary of State in England is described in the accounts as Imperial, while that assigned to the local Governments is described as Provincial. The expenditure is similarly classified. As matters now stand, the Government of India receives the whole of the revenue under the heads Opium, Salt, Customs, Tributes from Native States, Post Office, Telegraph, Railways (with the exception of one small line), Mint, and Military Receipts, and are responsible for the expenditure under the corresponding heads, as well as for Home charges and the bulk of the expenditure under the head Interest on Debt. Revenue and expenditure under other heads are divided between Imperial and Provincial, or wholly Provincial. The distribution under the various heads in 1911–12 is shown in the table on pages 150 and 151. The table below, which indicates the distribution of the total revenue and expenditure in each year, shows how greatly the shares allotted to the Provincial Governments increased during the decade.

	Revenue.			Expenditure.		
	In India.		In England.	In India.		In England.
	Imperial.	Provincial.		Imperial.	Provincial.	
	£	£	£	£	£	£
1902–03 - -	47,204,780	17,397,280	694,805	26,460,769	17,397,280	18,361,821
1903–04 - -	51,118,372	19,104,009	746,744	30,721,302	19,104,009	18,146,472
1904–05 - -	52,324,849	18,152,004	636,103	30,041,119	18,152,004	19,463,757
1905–06 - -	50,030,081	19,865,252	951,232	30,271,620	19,865,252	18,617,465
1906–07 - -	50,472,873	21,798,272	874,465	30,549,556	21,798,272	19,208,408
1907–08 - -	48,443,585	21,841,053	718,637	30,368,909	21,841,053	18,487,267
1908–09 - -	44,987,891	24,171,904	601,740	30,402,182	24,171,904	18,925,159
1909–10 - -	48,810,211	25,072,077	711,207	29,791,861	25,072,077	19,122,916
1910–11 - -	52,851,503	26,855,113	975,857	30,309,510	26,855,113	19,581,563
1911–12 - -	53,146,077	28,597,262	1,092,411	30,340,497	28,597,262	19,957,657

Receipts and expenditure in England are classed as Imperial. The equality between Provincial receipts and expenditure, as shown in the general accounts, is due to the practice of transferring to the Provincial balances, or making good from those balances as the case may be, any surplus or deficit resulting from the Provincial operations of the year. The amounts by which the Provincial balances were in each year increased or reduced are shown under the head "Provincial Adjustments" on page .

The local Governments have to a large extent a free hand in regard to their shares of the revenues; but, as has already been indicated, their financial administration is subject to the general supervision of the Supreme Government, and they are bound by a large number of specific restrictions on expenditure. They have no borrowing powers, nor can they impose additional taxation without the sanction of the Government of India.

The following table shows for each province separately the amount by which the total revenue collected therein in the last two years of the decade (whether classified in the accounts as Imperial or Provincial) exceeded or fell short of the total expenditure incurred therein, and thus indicates the extent to which each province contributed towards the expenditure of the Government of India and the Secretary of State, or drew upon the general revenues. The table shows also the state of the Provincial balances, and the extent to which they were increased, or drawn upon, in 1911–12.

(Finance.)

Provinces, &c.	1910–11.		1911–12.		Provincial Balance, 31st March 1912.	Increase or *Decrease* of Balance, 1911–12.
	Excess of Revenue.	Excess of Expenditure.	Excess of Revenue.	Excess of Expenditure.		
	£	£	£	£	£	£
Bengal	9,905,421	—	8,511,764	—	1,424,967	553,082
Eastern Bengal and Assam	652,373	—	537,732	—	833,900	347,920
United Provinces	3,005,516	—	2,260,342	—	588,982	9,616
Punjab	1,255,578	—	1,493,950	—	691,536	226,537
Burma	2,221,465	—	2,280,092	—	276,535	*84,003*
Central Provinces and Berar	308,083	—	293,535	—	265,786	80,972
Madras	4,538,970	—	4,562,551	—	1,235,240	195,900
Bombay	4,926,962	—	5,248,966	—	726,149	*360,941*
North-West Frontier Province	—	*370,407*	—	*384,784*	—	—
India, General	—	*3,901,968*	—	*1,998,569*	—	—
England	—	*18,605,706*	—	*18,865,246*	—	—
Net result	Surplus £3,936,287		Surplus £3,940,334		—	Net Provincial Surplus £969,084

The Budget.—Indian finance has been regulated by the Budget system since 1860. Towards the end of the financial year, which terminates on the 31st March, the Budget estimates for the coming year are laid before the Legislative Councils. The extensive changes in procedure introduced in 1910 under the Indian Councils Act of 1909 have been dealt with in some detail in Chapter IV.*, and it is unnecessary to repeat the account of the existing procedure there given. Up to, and including, 1909 the annual Financial Statement of the Government of India, which includes besides the Budget estimates the revised estimates for the year about to end, and the "actuals" or closed accounts of the previous year, was laid before the Legislative Council towards the end of March in its final shape; members were at liberty to offer observations, but not to put any motion or divide the Council. Under the new rules, the Financial Statement is laid before the Council at an earlier date and discussed at subsequent meetings, at which members may move resolutions. Resolutions, if carried, have effect only as recommendations to the Governor-General in Council; but under the new procedure the members of the Legislative Council take a real and active part in shaping the financial proposals of the year. The Budget proper, consisting of the estimates in their final form, as revised in the light of the latest information, and of the discussions on the preliminary estimates, must be presented to the Council by the Finance Member on or before the 24th March. The Financial Statement and Budget, with a report of the discussions in the Legislative Council, are laid before Parliament shortly afterwards. The procedure in regard to the provincial Budgets follows the same general lines.

Accounts and Audit.—The Accounts Department, which manages the civil accounts of both the Supreme and the Provincial Governments, is an Imperial agency. At its head is the Comptroller and Auditor-General, in whose office all the accounts of the country are brought together and compiled. Subordinate to him are the Provincial Accountants-General, who keep the accounts of Imperial receipts and expenditure within their provinces, and also the accounts of the local Governments.

There is a Government treasury, which receives the revenues and makes local payments, at the headquarters of each district. The Accounts officers in the various provinces are charged with the duty of seeing that no payment is made except upon proper authority, and a second check is exercised by the Comptroller and Auditor-General through his own staff by means of test audits.

Exclusion of Accounts of Local Funds.—The finance and revenue accounts of the Government of India include the revenues and expenditure of both the Imperial and Provincial Governments. Up to 1907–08 the transactions of district boards and certain other local funds were also included. The revenues of these funds, which are

* *See* page 60.

raised locally, devoted mainly to local purposes, and managed as a rule by local bodies, have since 1908 been for the most part excluded from the general public accounts and shown separately. In the few cases where, for special reasons, they have not been excluded, they have been absorbed and are now included under the head "Imperial" or "Provincial." The head "Local" has thus disappeared. Municipal and port funds, which were at one time incorporated in the same way, had already been excluded many years ago. The effect of the further change made in 1908 was to diminish the aggregate figures of revenue and expenditure by between £2,000,000 and £3,000,000 each, but the surplus or deficit of the year is not affected, except for the very small differences resulting from transfers of local revenues and expenditure to the head "Imperial." The figures for 1907–08 and earlier years quoted in this chapter have been corrected, by the exclusion or absorption of "Local" figures, so as to correspond with those for the later years.

Total Revenue and Expenditure.—The table on pages 150 and 151 shows in abstract form the whole of the receipts and disbursements of the Government of India, in India and in England, in 1911–12, as stated in the accounts. The figures are gross—all receipts being included under revenue and all outlay under expenditure—with the exception that the working expenses of railways, instead of being shown under expenditure, are deducted from revenue. The railway revenue shown therefore represents the net amount received by Government. This arrangement was adopted in 1907, the view being taken that the inclusion of the railway figures in gross unduly inflated the accounts and tended to convey erroneous impressions. The interest on railway debt continues to be shown as expenditure. In the marginal table, which shows the total revenue and expenditure charged to revenue for each year of the decade, a corresponding adjustment has been made in the figures for 1906–07 and preceding years.

—	Revenue.	Expenditure charged to Revenue.	Surplus or *Deficit.*
	£	£	£
1901–02* -	64,633,246	59,681,619	4,951,627
1902–03 -	65,296,865	62,228,871	3,067,994
1903–04 -	70,969,125	67,971,782	2,997,343
1904–05 -	71,112,956	67,656,879	3,456,077
1905–06 -	70,846,565	68,754,337	2,092,228
1906–07 -	73,145,610	71,556,235	1,589,375
1907–08 -	71,003,275	70,697,229	306,046
1908–09 -	69,761,535	73,499,245	*3,737,710*
1909–10 -	74,593,495	73,986,854	606,641
1910–11 -	80,682,473	76,746,186	3,936,287
1911–12 -	82,835,750	78,895,416	3,940,334

* The effect of the changes referred to above is illustrated by the difference between these figures and those given for 1901–02 in the last decennial number of this Statement (revenue, £76,344,525: expenditure, £71,394,282), which included both gross railway figures and local fund figures.

For the purpose of comparing the relative effects on the financial position of Government in the different years of the main heads of revenue and expenditure, the figures may most conveniently be given in net form. They are brought together in the table on pages 152 and 153 in the form in which they are shown in the Return of the Net Income and Expenditure of British India annually laid before Parliament. In compiling these figures, the interest charges as well as the working expenses of the railways, interest charges and working expenses of irrigation works, the cost of the cultivation and manufacture of opium, and certain charges against other revenue-earning departments (but not the "cost of collection") are treated as deductions from revenue, and the receipts of spending departments are treated as deductions from expenditure. A point to be noticed in this table is that the "commercial undertakings"—post office, telegraphs, railways, and irrigation—which in the last decennial Statement were shown on the "expenditure" side, are now shown under "income." The total results attained by those departments during the decade entirely justify the transfer, but the telegraphs, which alone consistently showed a net profit throughout the decade 1892–1902, have fallen back while railways and irrigation have been making great advances. The decade was remarkable, by comparison with preceding decades, in that a surplus was realised in every year but one. The period of financial prosperity that began with 1898–99 lasted for ten years without interruption, and in the last two years of the decade satisfactory surpluses were again realised. The one deficit, in 1908–09, was the result partly of the failure of the crops in 1907–08, partly of the world-wide depression of trade, which affected the Indian finances most obviously through the medium of the railway returns.

Taking the period as a whole, revenue and expenditure both increased to a greater degree than in either of the two preceding decades. Under the separate heads, the

		Revenue.			
		In India.		In England.	Total.
		Imperial.	Provincial.		
	Revenue Heads.	£	£	£	£
Principal Heads of Revenue.	Land Revenue (excluding that due to Irrigation)	7,691,143	13,073,554	—	20,764,697
	Opium	5,961,278	—	—	5,961,278
	Salt	3,391,212	—	—	3,391,212
	Stamps	2,442,874	2,372,255	—	4,815,129
	Excise	2,262,357	5,347,396	—	7,609,753
	Provincial Rates	906	547,774	—	548,680
	Customs	6,468,567	—	—	6,468,567
	Assessed Taxes	912,434	740,444	—	1,652,878
	Forest	69,214	1,882,965	—	1,952,179
	Registration	4,493	441,369	—	445,862
	Tributes	595,005	—	—	595,005
	TOTAL	29,799,483	24,405,757	—	54,205,240
	Expenditure Heads.				
Debt Services—Interest		699,262	292,477	457,002	1,448,741
Commercial Services.	Post Office	2,134,279	—	—	2,134,279
	Telegraph	1,082,436	—	4,989	1,087,425
	Railways	15,844,513	2,157	45,055	15,891,725
	Irrigation	1,814,341	2,165,711	—	3,980,052
Other Public Works—Civil Works, &c.		70,256	256,668	—	326,924
Mint		366,963	—	137	367,100
Civil Departments		70,239	1,166,035	1,857	1,238,131
Miscellaneous Civil Services.	Superannuation	82,443	52,308	66,719	201,470
	Exchange	105,697	—	—	105,697
	Miscellaneous	168,934	203,370	36,714	409,018
	Other heads	44,112	52,779	—	96,891
Famine Relief and Insurance.	Famine Relief	—	—	—	—
	Other heads	—	—	—	—
Military Services	Army—Effective	616,362	—	444,668	1,061,030
	Army—Non-effective	83,066	—	35,270	118,336
	Marine	84,900	—	—	84,900
	Military Works	78,791	—	—	78,791
	Special Defences (1902)	—	—	—	—
	TOTAL	23,346,594	4,191,505	1,092,411	28,630,510
Provincial Adjustment.	Surplus	—	—	—	—
	Deficit	—	—	—	—
	TOTAL	53,146,077	28,597,262	1,092,411	82,835,750

* NOTE.—These are the net receipts as shown in the statement presented with the Indian Budget. In the return from which the table on pages 152 and 153 is compiled, the cost of collection of the revenue is shown in a single entry under a separate head on the expenditure side, and is thus not set off against revenue under each head. The net receipts shown under the revenue heads in this table are therefore smaller, except in the case of opium, where the expenditure is on production, and tributes, where the cost of collection is *nil*.

† Including miscellaneous compensations.

OF INDIA, IN INDIA AND IN ENGLAND, 1911–12. (Finance.)

Expenditure.						Net Receipts.*	Net Charges.
In India.				In England.	Total.		
Refunds and Drawbacks, Assignments and Compensations.		Cost of Collection and Production.					
Imperial.	Provincial.	Imperial.	Provincial.				
£	£	£	£	£	£	£	£
110,545	653,825	272,673	3,511,745	2,036	4,550,824	16,213,873	—
3,614	—	727,852	—	1,600	733,066	5,228,212	—
254,477	—	367,761	—	729	622,967	2,768,246	—
28,467	27,128	— *30,392*	74,651	89,931	189,785	4,625,344	—
6,399	70,474	142,638	276,504	111	496,126	7,113,627	—
—	580	—	5,695	--	6,275	542,405	—
181,838	—	250,246	—	467	432,551	6,036,017	—
5,844	4,983	14,235	14,043	—	39,105	1,613,773	—
103	6,433	61,372	1,074,647	6,183	1,148,738	803,440	—
—	1,123	1,357	246,899	—	249,379	196,482	—
200,175†	1,183†	—	—	—	201,358	393,647	—
791,462	765,729	1,807,742	5,204,184	101,057	8,670,174	45,535,066	—
Imperial.		Provincial.					
£		£					
— *441,703*		195,836		2,283,602	2,037,735	—	588,994
1,953,549		—		54,921	2,008,470	125,809	—
910,266		—		183,668	1,093,934	—	6,509
3,297,688		1,557		8,804,710	12,103,955	3,787,770	—
1,214,206		1,843,242		117,435	3,174,883	805,169	—
749,160		4,620,095		84,793	5,454,048	—	5,127,124
110,903		—		5,604	116,507	250,593	—
3,060,714		12,902,198		503,254	16,466,166	—	15,228,035
83,398		1,063,526		2,040,496	3,187,420	—	2,985,950
—		—		—	—	105,697	—
64,141		289,855		34,913	388,909	20,109	—
290,094		491,962		540,438	1,322,494	—	1,225,603
114,300		— 7		—	114,293	—	114,293
616,027		250,000		19,680	885,707	—	885,707
13,893,598		—		2,439,364	16,332,962	—	15,271,932
699,045		—		2,504,539	3,203,584	—	3,085,248
250,796		—		199,932	450,728	—	365,828
872,407		—		37,250	909,657	—	830,866
2,705		—		2,001	4,706	—	4,706
27,741,294		21,658,264		19,856,600	69,256,158	—	—
—		1,414,027		—	1,414,027	—	969,084
—		*444,943*		—	*444,943*	—	—
30,340,497		28,597,262		19,957,657	78,895,416	50,630,213	46,689,879

	Surplus	3,940,334	—
Capital Account	Railway Irrigation and other Capital not charged to Revenue :—		
	Capital raised and deposited by Railway Companies (net)	17,497	—
	Outlay on Irrigation Works	—	1,536,531
	Outlay on State Railways	—	6,981,384
	Initial expenditure on new Capital at Delhi	—	4,992
	Outlay of Railway Companies (net)	—	986,530
Debt, Deposits, Advances, and Remittances.	Permanent Debt (net)	1,823,173	—
	Temporary Debt (net)	—	500,000
	Unfunded Debt (net)	1,815,193	—
	Loans and Advances by Imperial Government (net)	201,914	—
	Loans and Advances by Provincial Governments (net)	—	193,155
	Loans to Local Boards for Railway Construction (net)	6,583	—
	Deposits and Advances (net)	2,209,480	—
	Remittances (net)	49,524	—
	Secretary of State's Bills drawn (net)	25,070,216	—
	Secretary of State's Bills paid (net)	—	24,929,181
Cash Balance	Opening Balance (net)	31,741,271	—
	Closing Balance (net)	—	31,743,412
	TOTAL	66,875,185	66,875,185

NET INCOME.

——	1901–02.	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
	£	£	£	£	£	£	£	£	£	£	£
I. Land Revenue, &c.:											
Land Revenue	17,510,986	17,668,701	18,485,780	18,198,606	18,102,520	19,066,832	17,982,592	19,005,038	20,554,980	20,112,161	20,000,327
Forests	1,153,820	1,295,029	1,477,393	1,599,162	1,775,124	1,763,627	1,727,701	1,691,865	1,728,885	1,822,988	1,945,642
Tributes from Native States	556,980	581,995	410,827	421,303	396,867	400,756	389,366	387,557	389,355	408,694	393,648
Total	19,221,786	19,545,725	20,374,000	20,219,071	20,274,511	21,231,215	20,099,659	21,084,460	22,673,220	22,343,843	22,339,617
II. Opium	3,240,068	2,846,869	3,506,178	4,050,999	3,572,944	3,743,773	3,571,948	4,645,113	4,195,614	6,271,531	5,228,212
III. Taxation:											
Salt	5,673,991	5,931,933	4,981,704	5,093,466	4,109,939	4,095,173	3,072,378	3,008,703	3,054,647	2,916,767	3,136,736
Stamps	3,409,436	3,434,401	3,538,237	3,697,102	3,876,326	3,985,706	4,212,194	4,293,955	4,496,267	4,757,510	4,759,534
Excise	4,015,433	4,373,833	4,922,175	5,295,863	5,621,059	5,835,462	6,163,111	6,313,779	6,462,226	6,957,379	7,532,880
Provincial Rates	1,036,027	1,018,783	1,021,079	1,035,889	951,661	514,785	524,756	532,976	538,300	552,860	548,100
Customs	3,734,517	3,829,848	3,839,066	4,267,031	4,258,366	4,232,499	4,895,771	4,725,083	4,855,982	6,497,001	6,286,729
Assessed Taxes	1,362,227	1,395,736	1,198,816	1,262,521	1,314,678	1,416,327	1,495,853	1,544,576	1,546,206	1,583,683	1,642,051
Registration	312,081	312,659	326,041	337,921	361,135	378,891	414,068	429,975	429,325	424,645	444,738
Total	19,543,712	20,297,193	19,827,118	20,989,793	20,493,164	20,458,843	20,778,131	20,849,047	21,382,953	23,689,845	24,350,768
IV. Commercial Undertakings:											
Post Office	134,462	115,676	138,338	91,651	109,964	148,213	51,279	*— 71,133*	*— 353*	46,030	125,809
Telegraph	3,922	*— 32,763*	*— 59,189*	*— 4,345*	*— 166,635*	*— 173,159*	*— 77,650*	*— 49,976*	*— 89,582*	20,327	*— 6,509*
Railways	844,651	224,581	853,120	2,097,589	1,993,826	2,307,673	1,563,002	*— 1,242,250*	824,922	2,017,496	3,787,770
Irrigation	169,330	193,394	230,663	283,344	125,995	796,156	646,475	608,823	606,300	584,387	805,169
Total	1,152,365	500,888	1,162,932	2,468,239	2,063,150	3,078,843	2,183,106	*— 754,536*	1,341,287	2,668,240	4,712,239
V. Mint	51,340	*— 12,776*	99,181	88,533	201,104	252,600	279,017	*— 89,475*	*— 17,805*	103,741	250,593
VI. Exchange	25,494	31,571	58,429	94,065	82,870	190,022	94,511	*— 34,437*	44,481	70,084	105,697
Total Net Revenue	43,234,765	43,209,470	45,027,838	47,910,700	46,687,743	48,955,296	47,006,372	45,700,172	49,619,750	55,147,284	56,987,126

Net Expenditure.

I. Debt Services: Net interest payments other than those charged to railways and irrigation.	1,165,394	971,365	809,706	805,818	474,298	943,691	855,087	979,507	930,702	703,463	588,994
II. Military Services:											
Army - - - -	14,786,342	16,221,402	16,775,780	19,214,763	18,077,434	18,440,276	17,625,054	18,314,327	17,923,453	18,073,131	18,357,180
Marine - - - -	460,810	354,843	348,418	416,998	407,300	515,210	397,338	391,509	377,697	354,080	365,828
Military works - -	917,140	1,058,368	989,571	936,137	1,045,599	1,076,516	1,109,675	908,108	782,569	829,844	830,866
Special defences - -	—	—	27,054	128,295	146,306	138,358	116,287	29,044	28,604	7,987	4,706
Total - - -	16,164,292	17,634,613	18,140,823	20,696,193	19,676,639	20,170,360	19,248,354	19,602,988	19,112,323	19,265,042	19,558,580
III. Collection of Revenue -	4,516,796	4,640,825	4,876,204	5,138,898	5,399,639	5,556,014	5,729,823	6,026,572	6,021,503	6,114,457	6,383,531
IV. Civil Services:											
Civil departments - -	8,630,990	9,178,739	9,149,849	9,532,144	10,473,493	11,545,529	11,999,649	13,342,704	13,039,893	13,720,244	15,228,035
Miscellaneous civil charges	3,607,027	4,070,943	3,878,954	3,825,364	3,843,285	3,756,653	4,155,959	4,299,871	4,146,287	4,202,960	4,191,444
Civil works (including construction of railways charged to provincial revenues).	2,324,150	2,837,800	3,155,058	3,266,337	3,944,127	4,071,689	4,436,577	4,208,404	3,868,365	4,243,629	5,127,124
Total - - -	14,562,167	16,087,482	16,183,861	16,623,845	18,260,905	19,373,871	20,592,185	21,850,979	21,054,545	22,166,833	24,546,603
V. Famine Relief and Insurance	884,061	983,090	905,680	1,000,009	1,000,930	1,009,743	1,296,063	1,645,170	1,000,000	1,000,000	1,000,000
VI. Provincial Adjustments:											
Add—Increase of provincial balances by unspent grants.	990,428		1,114,221	189,860		312,242			894,036	1,961,202	969,084
Deduct—Portion of provincial expenditure defrayed from provincial balances.		*— 175,899*			*— 216,896*		*—1,021,186*	*— 667,343*			
Total Net Expenditure -	38,283,138	40,141,476	42,030,495	44,454,623	44,595,515	47,365,921	46,700,326	49,437,882	49,013,109	51,210,997	53,046,792
Surplus - - -	4,951,627	3,067,994	2,997,343	3,456,077	2,092,228	1,589,375	306,046		606,641	3,936,287	3,940,334
Deficit - - -								*3,737,710*			

most noticeable features were, on the revenue side, the increased receipts from forests, opium, excise, customs, railways, and irrigation, and the decreases under salt and provincial rates (these decreases being due, as explained elsewhere, to special causes), and, on the expenditure side, the increase under the head "civil departments."

Progress of Revenue and Expenditure.—The progress of revenue and expenditure under the different heads may now be briefly reviewed. For this purpose the variations may conveniently be shown in percentage form, following the practice adopted in previous decennial issues of this Statement: the figures for 1901–02 are taken as the standard for comparison and represented by 100 in each case. The figures used are the figures of net income and expenditure shown in the table on pages 152 and 153. The main sources of revenue and spending departments are dealt with again in greater detail, and from the administrative point of view, in subsequent chapters; in this chapter it is proposed only to review them briefly in their financial aspect.

Total Net Revenue.—Between 1901–02 and 1911–12 the total net revenue increased by 31·8 per cent. as compared with 15 per cent. between 1891 and 1901, and 10 per cent. between 1881 and 1891. The decrease in 1905–06 was mainly due to the diminution in the revenue from salt following on the reduction of the salt tax made in that year, while the set-back in 1907–08 and 1908–09 shows the effect of the unfavourable agricultural conditions and the great drop in the railway revenue that marked those years. In the last two years there were conspicuous increases under the heads of opium, excise, customs, and railways.

Year.	Variation.
1901–02	100·0
1902–03	99·9
1903–04	104·1
1904–05	110·8
1905–06	107·9
1906–07	113·2
1907–08	108·7
1908–09	105·6
1909–10	114·7
1910–11	127·5
1911–12	131·8

Heads of Revenue.—*Land Revenue.*—The land revenue, which is by far the largest single item on the revenue side, accounting for more than a third of the net revenue and about a quarter of the gross revenue, is fixed by settlements which are, generally speaking, either permanent or subject to revision only at long intervals. Rapid expansion is therefore in the nature of things not to be expected under this head; but the receipts show a steady upward tendency, which is masked to some extent by the annual fluctuations depending on the character of the seasons. The share of the "assets" reserved to Government has been continually diminished, but the value of the "assets" themselves has increased so greatly with extended cultivation, a growing population, rising prices, and the development of trade, that a diminishing share yields a gradually increasing revenue. In years of drought the land revenue collections may fall far below the normal, and the most noticeable feature of the decade was the drop in 1907–08, due to the failure of the monsoon, and consequently of the autumn harvests, in several provinces. The recovery in the following years was accentuated by payments of arrears. The land revenue figures exclude receipts directly attributable to the effect of the Government irrigation works, which are credited to irrigation. These receipts amounted in 1911–12 to over £1,351,000.

Year.	Variation.
1901–02	100·0
1902–03	100·9
1903–04	105·5
1904–05	103·9
1905–06	103·3
1906–07	108·8
1907–08	102·6
1908–09	108·5
1909–10	117·3
1910–11	114·8
1911–12	114·2

Forests.—The forest revenue is derived almost entirely from the sale of timber and other forest produce. The Forest Department has looked to the preservation and improvement of this valuable property, and to its administration for the benefit of the people, rather than to the raising of an immediate large income, but, as the figures for the decade show, its operations have been a source of increasing profit. It should be pointed out that, in the case of the forests, the charges shown under "Cost of Collection and Production" (Conservancy, Establishment, &c.), which, as has already been mentioned (*see* note on page 150), are here left out of account, bear a high proportion to the gross revenue. If the charges are taken into account, the net revenue shows a greater proportionate increase during the decade. The figures are given in the chapter on Forests.

Year.	Variation.
1901–02	100·0
1902–03	112·2
1903–04	128·0
1904–05	138·6
1905–06	153·8
1906–07	152·8
1907–08	149·7
1908–09	146·6
1909–10	149·8
1910–11	158·0
1911–12	168·6

Tributes.—"Tributes and Contributions from Native States" constitute a comparatively small, and practically stationary, head of revenue, and do not call for detailed reference here. Details are given on page 17.

Opium.—The net revenue shown under this head is that arising from the export trade, the revenue derived from opium consumed in India being credited to excise. The revenue is, in normal circumstances, subject to great fluctuations, arising from variations in price and in the character of the seasons; during the latter part of the decade it was governed by the altogether abnormal conditions accompanying the progressive diminution of the export to China that began in 1908. From the purely financial point of view, the results were for the time being highly satisfactory, the effect of the reduction in the quantity exported being much more than counterbalanced by a great rise in prices, coupled with a reduction of expenditure resulting from the contraction of cultivation. The large surpluses derived from opium in 1910–11 and 1911–12 were treated as non-recurring windfalls, and specially appropriated to the reduction of debt and to non-recurring expenditure on education and sanitation.

Year.	Variation.
1901–02	100·0
1902–03	87·8
1903–04	108·2
1904–05	125·0
1905–06	110·2
1906–07	115·5
1907–08	110·2
1908–09	143·3
1909–10	129·4
1910–11	193·5
1911–12	161·4

Taxation.—The total receipts from taxation proper are rather greater than the land revenue. The table below shows the variation of the total, and of the several taxes separately, during the decade.

	Salt.	Stamps.	Excise.	Provincial Rates.	Customs.	Assessed Taxes.	Registration.	Total Taxation.
1901–02	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1902–03	104·5	100·7	108·9	98·3	102·5	102·4	100·2	103·8
1903–04	87·7	103·7	122·5	98·5	102·8	88·0	104·4	101·4
1904–05	89·7	108·4	131·8	99·9	114·2	92·6	108·6	107·3
1905–06	72·4	113·6	139·9	91·8	114·0	96·5	115·7	104·8
1906–07	72·1	116·9	145·3	49·6	113·3	103·9	121·4	104·6
1907–08	54·1	123·5	153·4	50·6	131·0	109·8	132·6	106·3
1908–09	53·0	125·9	157·2	51·4	126·5	113·3	137·7	106·6
1909–10	53·8	131·8	160·9	51·9	130·0	113·5	137·5	109·4
1910–11	51·4	139·5	173·2	53·3	173·9	116·2	136·0	121·2
1911–12	55·3	139·6	187·6	52·9	168·3	120·5	142·5	124·6

Incidence of Taxation.—As to the pressure of taxation on the people, it may be mentioned that the receipts from land revenue and taxation in 1901–02 (leaving out of account the local rates, &c., now excluded from the accounts of the Government of India, and deducting refunds and assignments) were £37,054,698, while the population of British India was 231½ millions, giving an incidence per head of about 3*s.* 2½*d.*; in 1911–12, the revenue was £44,351,095, and the population 244¼ millions, giving an incidence of about 3*s.* 7½*d.* per head. No allowance is here made for salt and other taxation ultimately borne by subjects of native states.

Changes in Taxation.—In 1903 the Government of India found themselves, for the first time since 1882, in a position to propose a liberal remission of taxation, and the continuance of financial prosperity throughout the first half of the decade enabled them to make further reductions in the succeeding years. The most important changes were in the salt tax, the general rate of duty being reduced from 2½ rupees to 2 rupees a maund in 1903, from 2 rupees to 1½ rupees in 1905, and finally from 1½ rupees to 1 rupee in 1907. In 1903 also exemption from income tax was granted to incomes below Rs. 1,000 (£66 a year); the taxable minimum was previously Rs. 500. In 1905 the so-called famine cesses in the United Provinces, Central Provinces, and Punjab, which produced about £150,000 a year, were abolished, while in the following year various village service, *patwari*, and other cesses, producing over £500,000 a year, were also done away with. In 1910 changes in the opposite direction became necessary, and new taxation was imposed, partly with a view to making good the expected loss of opium revenue, and partly, also, to provide for necessary increases of expenditure. For the bulk of the additional revenue recourse was had to additional import duties on liquors, tobacco, silver, and petroleum. The increase in the case of liquors amounted to from 30 to 50 per cent., while substantial duties on both manufactured

and unmanufactured tobacco took the place of a 5 per cent. *ad valorem* duty on manufactured tobacco alone; silver was made subject to a fixed duty of 4 annas per ounce instead of one at the rate of 5 per cent. *ad valorem*, and the duty on petroleum was raised from 1 anna to 1½ annas a gallon. Some consequential alterations in the excise duties on liquors were made, and at the same time the stamp duties on bills of exchange, on the issue and transfer of shares and debentures, on agreements for the sale of those securities, and on probate, were raised. In 1911 the tobacco duties, which had not fulfilled expectations, were reduced by about a third, in the hope (which was not realised in 1911–12) that a somewhat lower range of duties would be more productive. The effects of these various changes are clearly to be seen in the table above; they will be more fully dealt with in subsequent chapters, and it only remains here to add a few explanatory remarks and notes on the revenue-producing capacities of the different forms of taxation.

Salt.—For a large number of the people the salt tax is the only contribution made towards the public expenditure. The rate of one rupee a maund, which has been general throughout India since 1907, is equivalent to about one-fifth of a penny a pound. The total consumption of salt rose steadily throughout the decade, but the rise was not large enough to make good more than a small proportion of the revenue lost by the reductions of the rate of duty. The revenue from the duty on imported salt is included under this head.

Stamps.—The stamp revenue is derived from judicial or court-fee stamps and non-judicial or revenue stamps. The judicial stamp revenue, which constitutes more than two-thirds of the whole, may be regarded in the light of payment for service rendered by the costly judicial establishment rather than as a tax in the proper sense of the word. This head of revenue shows, as usual, a steady and continuous advance.

Excise.—The excise revenue is derived from intoxicating liquors, hemp drugs, and opium consumed in the country, and is levied in the form of duty on manufacture and fees for sale licences. The bulk of the revenue is derived from spirits. The excise systems and rates of duty vary from province to province. The large increase in the revenue during the decade was due, not merely to the expansion of consumption, which is normally greater in times of prosperity, but also to the imposition of progressively higher rates of duty and the increasingly effective control of the excise administration leading to a continual substitution of licit for illicit consumption.

Provincial Rates.—Under this head were formerly included, among other items, district local fund cesses, provincial cesses for expenditure on roads, schools, &c., and cesses for village services and *patwaris*. Some of these, as mentioned above, were abolished in 1905 and 1906; others, which are credited to local funds, no longer appear in the general accounts of the Government of India, and have been omitted throughout in the figures used in this chapter. The only cess of any importance appearing under this head in 1911–12 was the Public Works cess in Bengal and Eastern Bengal. The only other large item included in the total was an amount appropriated by the Government of the United Provinces from the local rates for the payment of rural police in Agra.

Customs.—Under this head are included, besides the revenue from the import duties and the export duty on rice, the receipts from the excise duty on cotton manufactures. The changes in the import duties made during the decade have already been mentioned, and the whole subject is dealt with in detail in Chapter XII.

Assessed Taxes (*Income Tax*).—The only tax now included under this head is the general tax on non-agricultural incomes over Rs. 1,000 a year, and on the whole of the net profits of companies, which is levied at the rate of 4 pies in the rupee (5*d.* in the pound), or according to a fixed scale approximating to this rate, on incomes between Rs. 1,000 and Rs. 2,000, and at the rate of 5 pies in the rupee on incomes over Rs. 2,000 and on the profits of companies. The income tax is less affected by the accidents of the year than other heads of revenue, and increases steadily; the total number of persons assessed to the tax has always been a very small fraction of the total population, and the raising of the taxable minimum of income from Rs. 500 to Rs. 1,000 in 1903 reduced the number of assesses, roughly speaking, by a half—from rather over half a million to rather less than a quarter of a million—though the drop in revenue was only about 14 per cent. Since then the number has slowly increased. Incomes above Rs. 2,000 constitute little more than a third of the total number, but pay nearly four-fifths of the tax.

Registration.—Fees for the registration of instruments, principally deeds of mortgage, make a comparatively small contribution to the revenues. The tendency is steadily upwards.

Commercial Undertakings.—The percentage method of treatment hitherto adopted offers no advantage in the case of the extensive and irregular fluctuations of the net revenue from the Post Office, Telegraphs, Railways, and Irrigation. These services are fully dealt with in subsequent chapters. The figures on page 152 bring out clearly the one very important fact that, in spite of the deficit in 1908–09, these services, which, taken together, were up to 1899 a constant and frequently very heavy charge on Government, are now making a substantial and growing contribution to the revenues.

Mint.—The profits on the coinage of rupees, which are transferred to the Gold Standard Reserve, are not credited to revenue. The mint receipts include a percentage on the value of new rupees coined, to cover cost of minting, also the profits on the circulation of bronze and nickel coinage, and fees received from various colonies for undertaking coinage. They fluctuate greatly according to the extent and nature of the year's operations, and, expenditure being comparatively steady, the net revenue is also very variable. The mint receipts or charges form, in any case, only a comparatively small item.

Exchange.—The accounts of the Government of India are prepared on a sterling basis, the rupee transactions in India being converted into pounds at the rate of 15 rupees to the pound; under this head are shown the small sums that have to be brought to account owing to the fact that the remittances to defray the net expenditure in England are not effected at exactly sixteen pence to the rupee. In every year, except 1908–09, the average rate was something over sixteen pence to the rupee, and the entry under this head took the form of a net receipt. Since 1898 the annual charges or receipts due to the fluctuations of exchange have become comparatively insignificant.

Total Net Expenditure.—As will be seen from the table on page 153, the figures of total net expenditure there given are affected very sensibly by the entries under the head "Provincial Adjustments." Under this head those portions of their revenues that the Provincial Governments do not spend, but transfer to their balances, are, for the purpose of striking a balance on the year, added to expenditure, while on the other hand provincial expenditure in excess of revenue, which is met from the provincial balances, is subtracted from the total. The provincial adjustments are therefore left out of account in the marginal table, with a view to indicating as nearly as possible the progress of actual net expenditure. Taking these figures, the year 1911–12 shows an increase of expenditure as compared with 1901–02 of 39·6 per cent., as compared with an increase of revenue of 31·8 per cent. In the decade 1892–1902 the total net expenditure was on the whole almost stationary.

Year.	Variation.
1901–02	100·0
1902–03	108·1
1903–04	109·7
1904–05	118·6
1905–06	120·1
1906–07	126·1
1907–08	127·9
1908–09	134·3
1909–10	129·0
1910–11	132·0
1911–12	139·6

Heads of Expenditure.—*Debt Services.*—The nature and progress of the net expenditure shown under this head may be best illustrated by showing how the actual figures for years at the beginning, middle, and end of the decade were arrived at:—

——	1901–02.	1906–07.	1911–12.
	£	£	£
Interest on total debt	7,062,927	7,903,353	9,282,229
Amount chargeable to railways	*4,551,597*	*5,548,410*	*6,664,210*
Amount chargeable to irrigation	*944,123*	*935,231*	*1,182,867*
Remainder chargeable on ordinary debt	1,567,207	1,419,712	1,435,152
Interest on other obligations	376,884	496,172	602,583
	1,994,091	1,915,884	2,037,735
Receipts	*778,697*	*972,193*	*1,448,741*
Net expenditure	1,165,394	943,691	588,994

(Finance.)

The interest on total debt increased steadily throughout the decade, as did also the amount charged to railways and irrigation, which is here deducted. The difference between the two, which represents the interest on ordinary debt, decreased down to 1905–06, when it amounted to £954,787, and rose again in the later years, largely owing to certain alterations in the distribution of the charges between the "public works" and "ordinary" branches of the debt, and in the rate of interest charged on the "public works" portion, made in 1906, the effect of which was to transfer interest charges of about £600,000 a year from the "public works" to the "ordinary" branch. "Interest on other obligations," the bulk of which consists of the interest on savings bank balances, increased steadily. Of the increase of nearly £500,000 in the receipts between 1906–07 and 1911–12 some £300,000 was derived from India and the remainder from this country. Increased receipts from loans to port trusts and municipal bodies, advances to landholders, &c., and from overdrawn capital accounts of railway companies, explain the greater portion of the Indian rise. In England the increase was due to larger receipts from the temporary loan of surplus cash balances and from interest on the securities held on behalf of the Paper Currency Reserve.

Military Services.—The years 1901–02 and 1902–03, and in a less degree 1903–04, were abnormal in that large savings were effected owing to the absence of Indian contingents in South Africa, China, and Somaliland; a large proportion of the saving was, however, devoted to meeting the cost of various measures of improvement. In 1904–05 nearly £500,000 was added on account of "service pay" for British troops, and the figures were further swollen by expenditure on the Tibet Mission. Increased expenditure on measures of reorganisation, redistribution, and rearmament, undertaken in accordance with the scheme prepared by the Commander-in-Chief, also began in 1904–05 and continued through succeeding years. By 1909 it was possible to decide to proceed in a more leisurely way with such portions of the reorganisation programme as were still outstanding, and in 1909–10 there was a decrease in expenditure in spite of the payment for the first time throughout the year of new charges amounting to nearly three-quarters of a million a year for increased payments to the War Office on account of the British Army in India and improvements in the pay of the Indian Army. These matters are more fully dealt with in Chapter XX.

Year.	Variation.
1901–02	100·0
1902–03	109·0
1903–04	112·2
1904–05	128·0
1905–06	121·7
1906–07	124·7
1907–08	119·0
1908–09	121·2
1909–10	118·2
1910–11	119·1
1911–12	121·0

Collection of Revenue.—The composition of the total entered under this head will appear from the figures for 1911–12 given on page 151; it includes all the items there shown under "Cost of collection and production," except the charge against opium. The cost of collection of the land revenue constitutes over 60 per cent. of the total; the charges under that head include the cost of district administration, of the departments of land records, and of survey and settlement operations. The two heads "Land Revenue" and "Forests" accounted for the bulk of the increase during the decade. The increase under the latter head was accompanied, as has already been shown, by a great rise in the gross revenue.

Civil Departments.—The continuous growth of expenditure on civil departments was a marked feature of the decade under review. All of the subheads included under this comprehensive head shared in the increase, but in very different degrees. The relative rates of progress of expenditure on the various branches of the administration will be best gathered from the table below. The increase, as will be seen, was most conspicuous under the heads Education, Police, Medical, and Scientific and other Minor Departments. The growth of expenditure is an indication of the special attention that these departments received during the decade.

Year.	Variation.
1901–02	100·0
1902–03	106·3
1903–04	106·0
1904–05	110·4
1905–06	121·3
1906–07	133·7
1907–08	139·0
1908–09	154·5
1909–10	151·0
1910–11	158·9
1911–12	176·4

CIVIL DEPARTMENTS.

—	1901–02.	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
	£	£	£	£	£	£	£	£	£	£	£
General Administration	1,290 577	1,439,359	1,414,758	1,395,865	1,510,891	1,524,835	1,622,143	1,694,833	1,655,779	1,756,260	2,626,241
Courts of Law	2,157,707	2,215,289	2,276,659	2,338,244	2,409,749	2,540,496	2,592,452	2,753,587	2,756,749	2,867,030	2,981,977
Jails	771,566	725,505	713,114	706,549	793,399	843,104	856,766	932,996	853,084	851,217	842,751
Police	2,691,344	2,737,693	2,787,373	2,860,934	3,061,756	3,534,705	3,813,354	4,196,222	4,222,306	4,351,612	4,602,977
Ports and Pilotage	129,255	134,470	143,339	203,341	157,771	161,010	174,799	252,098	174,779	177,890	181,690
Education	713,972	834,730	878,433	986,974	1,223,851	1,348,582	1,489,092	1,682,335	1,704,872	1,846,243	2,021,189
Ecclesiastical	112,776	111,023	113,741	121,039	121,371	125,906	123,546	120,082	124,043	124,678	124,488
Medical	609,682	715,565	680,014	707,797	762,377	816,388	856,803	1,017,712	967,833	982,922	1,155,490
Political	687,064	819,456	702,560	790,327	943,434	1,060,033	796,155	1,007,512	875,127	1,095,470	988,158
Scientific and other Minor Departments.	476,713	477,700	518,051	501,579	623,104	691,299	772,658	831,304	851,396	878,045	961,205
Total gross Expenditure.	9,640,656	10,210,790	10,228,642	10,612,649	11,607,703	12,646,358	13,097,568	14,488,681	14,185,968	14,931,367	16,466,166
Receipts	1,009,666	1,032,051	1,078,793	1,080,505	1,134,210	1,100,829	1,097,919	1,145,977	1,146,075	1,211,123	1,238,131
Net Expenditure	8,630,990	9,178,739	9,149,849	9,532,144	10,473,493	11,545,529	11,999,649	13,342,704	13,039,893	13,720,244	15,228,035

The charge for general administration represents the cost of the whole civil administration down to the grade of Commissioners of Divisions. It includes the charges on account of the India Office, and of the Viceroy, the Governors, Lieutenant-Governors, and Councils in India. In 1910–11 provision was made under this head for the cost of the enlarged legislative councils; the high figure for 1911–12 is due to expenditure on the Coronation Durbar. The Scientific and Minor Departments include the Survey of India, the Botanical and Geological Surveys, the Agricultural and Veterinary Departments, Observatories, Inspectors of Mines and Factories, and various other miscellaneous departments and posts. The rapid growth of the Agricultural Department during the decade accounted for a great part of the increase of expenditure under this sub-head.

Miscellaneous Civil Charges.—The nature of the charges shown under this head is indicated by the table, which shows the net expenditure under each head at the beginning and end of the decade. The figures (except those for territorial and political pensions, which tend to diminish by reason of the lapse of political pensions) show a gradual increase. The most important item is the charge for superannuation allowances and pensions. It may be noted that the gross disbursements in India under this head, which in 1901–02 amounted to 28 per cent. of the total (the rest being disbursed in England), in 1911–12 constituted 36 per cent.

—	1901–02.	1911–12.
	£	£
Territorial and political pensions	264,371	227,061
Civil furlough and absentee allowances	247,752	425,742
Superannuation allowances and pensions	2,530,773	2,985,950
Stationery and printing	470,806	572,800
Miscellaneous	93,325	*—20,109*
Total	3,607,027	4,191,444

Civil Works.—"Civil works" means mainly roads and buildings. The outlay in any year depends to a large extent on what provincial Governments can afford to spend; in times of stress this can be reduced more easily than other forms of expenditure. Thus expenditure in 1909–10 was below the normal, owing to the depletion of the provincial balances in consequence of famine and other causes. Under the same head are included some relatively trifling amounts expended from provincial revenues on railway construction.

Famine Relief and Insurance.—Before 1878 no special measures were taken to meet the financial obligations imposed by the periodic recurrence of famine. The experience of the famine of 1876–78 convinced the Government of India that such a state of things was unsound, and that efforts should be made to treat the cost of famine as an ordinary charge on the State. The result was the provision of an annual sum of

(Finance.)

1½ crores of rupees for "famine insurance." The manner of utilising this sum has varied from time to time, but the actual relief of famine in years of scarcity has always been the first charge on the grant. Throughout the period under review the annual grant was kept up to the standard figure of £1,000,000. In only two years did the expenditure chargeable to the grant materially exceed that amount. (Up to 1903–04 losses on the Bengal–Nagpur and Indian Midland Railways, which were constructed as "protective" works, were charged against the grant: this charge, which was discontinued in 1904, is not included in the figures for 1901–02, 1902–03, and 1903–04, quoted below.) The grant was throughout the decade applied in the first place to direct famine relief; secondly, to the construction or maintenance of "protective" railways and irrigation works; and thirdly, to the construction of "productive" public works, which would otherwise necessitate additional borrowing. The amount used for the last-mentioned purpose is shown under the head "Reduction or avoidance of debt." The distribution of the expenditure in each year is shown in the following table:—

—	1901–02.	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
	£	£	£	£	£	£	£	£	£	£	£
Famine relief	528,730	322,023	20,351	2,087	136,817	317,458	622,262	992,079	79,758	2,336	114,293
Construction of protective railways.		1,625	96,605	115,812	55,278	3,442	6,561	70	12,015	36,895	44,275
Construction of protective irrigation works.	70,693	94,742	144,446	215,913	296,573	356,460	417,240	403,930	432,889	359,674	383,465
Reduction or avoidance of debt.	284,638	564,700	644,278	667,097	512,262	332,383	250,000	250,000	475,338	601,095	457,967
Total	884,061	983,090	905,680	1,000,009	1,000,930	1,009,743	1,296,063	1,645,179	1,000,000	1,000,000	1,000,000

In 1907 an important change was made in the system of famine insurance, in view of the difficulties to which the provinces were liable to be subjected under the then existing arrangement, by which the cost of famine relief was a wholly provincial charge. An addition was made to the annual fixed assignments of the local Governments whose territories are liable to famine, roughly in proportion to the average expenditure incurred by them on famine relief during the preceding 25 years, the amounts being as follows:—Bombay, £91,300; Central Provinces, £85,300; United Provinces, £30,000; Bengal, £17,300; Madras, £16,700; Punjab, £9,300. This total amount of £250,000 is debited to the provincial revenues each year under the head Reduction or Avoidance of Debt, and the share of each province is entered to its reserve of credit with the Imperial Government. Each local Government is thus enabled to accumulate, up to a certain amount, a reserve of credit on which it can draw when it becomes necessary to incur expenditure on famine relief. The charges then incurred are entered in the accounts as Imperial expenditure. In the case of a famine of relatively small extent, the reserve of credit may be expected to be sufficient, usually, to meet the whole charge, the local Government being thus secured from all dislocation of its ordinary administrative machinery. If the reserve of credit is exhausted, further expenditure is under the new arrangement shared equally between the Government of India and the local Government, while further assistance is to be given from Imperial revenues in extreme circumstances.

Provincial Adjustments.—The nature of the adjustments made under this head has already been explained. The accounts are designed to show both the aggregate transactions of the Government and the position of the Imperial finances. The provincial figures are included, but since the Imperial and Provincial accounts are independent for the term of a settlement any difference between provincial receipts and expenditure does not affect the financial position of the Imperial Government. The adjustment leaves the two sides of the account in the relative positions in which they would have stood had the provincial transactions been altogether excluded.

Home Charges.—A few words may be said as to the Home Charges of the Government of India. It will be seen from the table on pages 150 and 151, which gives the revenue and expenditure in England under the main heads, that in 1911–12 the net expenditure in England, chargeable on the revenues of the year, amounted to £18,865,246. The distribution of this total, and of the corresponding total in 1901–02, is shown below:—

	1901–02.	1911–12.
	£	£
Interest and management of debt, and payment of interest and annuities on account of railways and irrigation works.	9,387,041	10,768,754
Payments in connection with Civil Departments in India	254,275	233,672
India Office (excluding pensions)	176,583	184,870
Army and marine effective charges	225,977	1,016,597
Stores of all kinds charged against revenue	1,993,174	1,191,371
Furlough allowances	615,921	988,853
Non-effective charges (pensions and gratuities)	4,224,476	4,481,129
Total £	16,877,447	18,865,246

These figures show that nearly 12 millions out of a total of under 19 million pounds in 1911–12 consisted of payments on account of capital and materials supplied by England, and belonged to a commercial rather than an administrative class of transactions.

Capital Transactions and Debt.—The table below shows for each year the receipts and disbursements outside the revenue account, in the form in which they are shown, for 1911–12, at the bottom of the table on page 151, with the closing balances in India and in England. The figures are net, and for the sake of clearness receipts are shown throughout in ordinary type and disbursements in *italics* :—

	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
	£	£	£	£	£	£	£	£	£	£
*Opening balance	18,573,438	17,850,203	19,164,334	21,012,351	20,217,976	15,935,049	18,590,212	18,689,542	28,105,046	31,741,271
Surplus or *Deficit*	3,067,994	2,997,343	3,456,077	2,092,228	1,589,375	306,046	*3,737,710*	*606,641*	3,936,287	3,940,334
Railway and Irrigation Capital not charged to Revenue :										
Capital raised through Companies towards outlay on State Railways.	1,303,361	—	963,636	1,487,995	—	1,897,112	4,278,547	2,459,426	2,294,278	—
Capital subscribed by Native States towards outlay on State Railways.	—	—	—	—	—	—	—	66,667	—	—
Profits on Rupee Coinage appropriated to Railway Construction.	—	—	—	—	—	1,123,604	51	—	—	—
Capital raised and deposited by Railway Companies.	1,326,635	*66,595*	1,448,684	*35,674*	*254,440*	346,664	1,020,306	*2,216*	87,241	17,497
Outlay on Irrigation Works	*564,191*	*507,898*	*361,172*	*556,194*	*797,627*	*845,722*	*983,489*	*1,052,349*	*1,203,888*	*1,536,531*
Outlay on State Railways	*4,584,001*	*4,535,105*	*5,897,023*	*9,410,199*	*7,915,041*	*10,567,045*	*9,488,168*	*6,321,617*	*8,915,205*	*6,981,384*
Outlay of Railway Companies	*2,254,870*	*1,854,690*	*1,537,691*	362,528	*1,766,953*	342,161	*562,613*	*2,117,982*	1,375,963	*986,530*
Charge involved in redemption of Railway Liabilities.	—	—	—	*12,980,960*	—	*2,144,800*	—	—	*5,904,100*	—
Initial expenditure on new Capital at Delhi.	—	—	—	—	—	—	—	—	—	*4,992*
Debt, Deposits, Advances, and Remittances :										
Permanent Debt — Net incurred or *discharged.*	1,039,655	2,146,825	3,413,480	16,752,546	4,166,102	10,725,963	5,633,956	10,408,347	8,896,956	1,823,173
Temporary Debt — Net incurred or *discharged.*	*500,000*	*1,166,667*	*1,833,333*	*500,000*	—	1,000,000	5,000,000	—	*1,000,000*	*500,000*
Unfunded Debt — Net incurred or *discharged.*	649,383	770,221	879,611	572,334	737,317	515,454	251,421	783,154	1,164,908	1,815,193
Deposits and Advances	1,118,711	1,972,248	1,087,925	742,434	955,167	649,910	*1,085,718*	4,274,012	1,550,367	2,209,480
Loans and Advances by Imperial Government. — Net repayments or *advances.*	17,610	*112,849*	112,637	1,065,079	*4,251*	400,703	396,302	157,027	174,074	201,914
Loans and Advances by Provincial Governments. — Net repayments or *advances.*	87,587	471,784	108,716	*292,401*	*581,430*	*1,621,843*	*944,407*	652,053	576,135	*193,155*
Loans to Local Boards for Railway Construction. — Net repayments or *advances.*	—	—	1,468	1,526	1,587	1,651	5,847	6,083	*6,328*	6,583
Remittances	*1,227,035*	1,214,730	*470,527*	623,473	499,437	39,917	*277,008*	286,264	203,370	49,524
Secretary of State's Bills drawn†	18,236,947	21,659,303	23,725,162	26,290,640	32,907,196	15,705,737	12,423,939	18,006,586	*23,635,309*	25,070,216
Secretary of State's Bills paid†	*18,461,021*	*21,674,459*	*23,449,633*	*27,009,730*	*33,819,366*	*15,220,369*	*11,831,826*	*18,796,592*	*23,244,792*	*24,929,181*
Total Receipts	26,847,883	31,232,394	35,197,396	49,628,255	40,856,181	32,712,761	29,010,269	37,706,260	42,528,247	35,133,914
Total Disbursements	*27,571,118*	*29,918,263*	*33,349,379*	*50,422,630*	*45,139,108*	*30,057,598*	*28,910,939*	*28,290,756*	*38,892,022*	*35,131,773*
Closing Balance India	12,082,416	11,869,552	10,749,770	11,781,457	10,328,237	12,851,723	10,235,827	12,295,428	13,566,922	12,279,69*
Closing Balance England	5,767,787	7,294,782	10,262,581	8,436,519	5,606,812	5,738,489	8,453,715	15,809,618	18,174,349	19,463,723
Closing Balance Total	17,850,203	19,164,334	21,012,351	20,217,976	15,935,049	18,590,212	18,689,542	28,105,046	31,741,271	31,743,412

* Including sums held in the Secretary of State's balances on account of the Gold Standard Reserve.
† Excluding Bills drawn against the Gold Standard and Paper Currency Reserves.

Little need be said here about most of the items included in this table. The entries in regard to railway and irrigation capital explain themselves. The Unfunded Debt consists mostly of Savings Bank Deposits; it includes also Service Funds. Under "Deposits and Advances" are included, among a large number of other items,

(Finance.)

additions to and withdrawals from the Provincial balances. "Loans and Advances" cover loans to Native States, to Corporations, Municipalities, &c., and advances to cultivators.

The increase in the closing balance, and especially in the part held in England, in the last three years of the decade was due to various causes, of which the most important was the large excess of revenue over expenditure in the last two years. Detailed information on this subject is given in the Memorandum on India Office Balances recently laid before Parliament [Cd. 6619 of 1913]. The closing balances shown in that memorandum exclude sums held on account of the Gold Standard Reserve, and are therefore somewhat smaller than those shown in the table above.

The Public Debt.—The subject of the public debt of India is closely connected with public works, since the greater part of the debt has been incurred for capital outlay on railways and irrigation. The registered debt consists of rupee loans raised in India and sterling loans raised in England. The total debt is divided in the accounts into Public Works Debt and Ordinary Debt, the amount entered under the former head being the equivalent of the total capital expenditure incurred by the State on public works, together with the amount advanced to railway companies for capital expenditure. The remainder of the debt is the "Ordinary Debt." The table below shows the total amounts of debt (excluding unfunded debt) under the different heads at the beginning, middle, and end of the decade:—

	Permanent Debt.			Temporary Debt.
	In India.	In England.	Total.	
	Rs.	£	£	£
31st March 1902	116,19,13,833	130,307,090	207,768,012	4,000,000
31st March 1907	130,45,50,655	147,518,634	234,488,677	—
31st March 1911	138,09,72,155	177,998,335	270,063,145	5,000,000
31st March 1912	139,96,36,205	178,486,597	271,795,677	4,500,000

The following table shows the distribution of the total permanent debt between the "Public Works" and "Ordinary" heads on the same dates:—

	Ordinary Debt.	Debt incurred for Railways and Irrigation Works.
	£	£
31st March 1902	69,167,015	138,600,997
31st March 1907	37,917,252	196,571,425
31st March 1911	40,426,082	229,637,063
31st March 1912*	33,041,732	238,748,953

* The total debt at the end of 1911-12 included also £4,992 for initial expenditure on the new capital at Delhi.

For many years the amount of ordinary debt has, apart from small fluctuations, shown a continual diminution. All loans, except the comparatively small proportion raised specifically for railway purposes, are treated in the first instance as ordinary or non-productive debt. At the end of each year, the amount actually spent during the year for capital purposes on railways and irrigation is ascertained, and that amount is transferred to the head of productive debt, the remainder only being treated as ordinary or non-productive. Of recent years, the sums thus transferred from ordinary to productive debt have usually been considerably larger than the total of the loans actually raised during the year, the funds obtained by borrowing having been supplemented from other sources, such as revenue surpluses and savings bank deposits. The result has been to effect a gradual reduction of the ordinary debt. The movement in this direction was helped by changes introduced in the accounts of 1906–07, with a view to a more accurate distribution of capital and interest between the public works and ordinary divisions of the debt, the result of which was to increase the proportion of the total debt charged to railways and irrigation, but at the same time to diminish the share of the interest charges borne by this branch of the debt. The interest on the public works debt is charged, as has already been

explained, against the revenue from railways and irrigation. This branch of the debt no longer imposes any burden on the general tax-payer; on the contrary, as the figures on page 153 show, the railways and canals now ordinarily yield a revenue sufficient to meet, not only their own interest charges, but also the total net charge under the head "Debt Services."

The bulk of the Indian debt (including the whole of the sterling debt) is held by Europeans; but of the rupee debt, the greater part is held in India, and an increasing share is in the hands of Indians. In 1902 it was estimated that about 58·8 per cent. of the rupee debt, including 1,929 lakhs held in London, was held by Europeans, and about 41·2 per cent. by Indians. In 1911 the estimated percentage held by Indians had risen to 47. The proportions assigned to Europeans in these estimates include the invested currency reserve.

During 1911–12 sterling bills to the amount of £4,500,000 were issued in England, in replacement of bills falling due, the average prices in April, June, and December being respectively £97 6*s.* 5¾*d.*, £96 18*s.* 5¼*d.*, and £96 19*s.* 4¾*d.* Bills to the amount of £500,000 were discharged in June 1911 without replacement. In India a rupee loan of two crores (£1,333,000) was issued in July 1911 at an average price of Rs. 96 : 3 : 10.5. Railway debenture bonds to the amount of £1,776,200 and India bonds to the amount of £500,000 were repaid.

Liabilities and Assets.—On the 31st of March 1912 the debt of India amounted to £276,295,677 (viz.: rupee debt, converted into sterling at 1*s.* 4*d.* the rupee, £93,309,080, and sterling debt, £182,986,597). There were also other obligations of the Government of India, including savings bank balances, judicial and departmental deposits, balances of service funds, &c., amounting to £26,856,915, and the various railway annuities, representing at present an annual charge of £3,357,300.

Up to the same date the Government of India had devoted £134,962,807 to the construction of railways, and £35,733,184 to the construction of irrigation works. It had purchased from guaranteed companies (in some cases by cash payments, in others by annuities, and in one case by the direct issue of India stock to the company) nine railways, on which, at the time of purchase, £108,092,386 had been spent from capital raised by the companies. Its advances to railway companies stood at £10,642,832, and it had lent £12,082,634 (net) to native states, corporations, agriculturists, &c. Other assets were the Gold Standard Reserve, on account of which £16,748,085 had been invested in sterling securities, £1,934,302 was held in rupees in India, and £1,073,710 in cash in England; the cash balances in India, £12,279,689; and the cash balances in England, £18,390,013 (in addition to the sum held on behalf of the Gold Standard Reserve).

Capital Outlay on Public Works.—The usual annual statement of the total capital outlay on railways and irrigation works is given below:—

	1910–11.*	1911–12.
Amount supplied by State borrowing or from the Cash Balances, without being charged against the Revenue of the year:—	£	£
State Railways	6,620,927	6,981,384
Irrigation Works	1,203,888	1,536,531
Amount met by Debenture Stock issued by Railway Companies	2,294,278	—
Amount defrayed from Revenue:		
Provincial and local Railways	795	836
Preliminary Railway expenditure not originally charged to construction	4,044	—
Protective Railways	36,895	44,275
Protective Irrigation Works	369,660	383,465
Other Irrigation Works	6,708	10,506
Total Direct Outlay by the State	10,527,195	8,956,997
Outlay by companies guaranteed or subsidised by Government	*1,469,278*	935,800
Branch lines not on firm guarantee	93,315	50,730
Total Capital Outlay on Railways and Irrigation £	9,151,232	9,943,527

* Revised figures.

(Finance.)

Currency and Exchange.—Up to 1893 the standard of value in India was silver, the rupee and the half-rupee being full legal tender for the payment of debts, and the mints being open to the receipt from the public of silver for coinage without limit. The effects upon Indian finance and trade of the great fall in the value of silver, as compared with gold, that began about 1870, and the measures taken in 1893 and subsequent years with a view to rendering the exchange value of the rupee independent of the price of silver, form part of the history of earlier decades, and were dealt with in the last decennial number of this Statement. It is only necessary here to recall the main facts, and, as regards the ten years actually under review, to note the success attained in keeping the exchange value of the rupee steady, with only slight fluctuations either way, at 1*s.* 4*d.* In its immediate effect on the finances of the Government of India, the continual fall in the rate of exchange caused serious difficulties, and a heavy addition to the expenditure. While its revenue is collected in rupees, the Government must provide for the greater part of its sterling payments by the sale in London for sterling of bills of exchange and telegraphic transfers payable in rupees in India, and the number of rupees required for defraying any given amount of sterling expenditure increased with each fall in the sterling rate at which bills were sold. Between 1870 and 1893 the rate of exchange fell, almost continuously, from over 1*s.* 11*d.* to the rupee to about 1*s.* 3*d.* In 1893 the Indian mints were closed to the unrestricted coinage of silver, and it was declared that gold coin and bullion would be received at the mints in exchange for rupees at the rate of 1*s.* 4*d.* to the rupee, and that the sovereign and half-sovereign would be received at the same rate in payment of sums due to Government. These preliminary steps towards the introduction of a gold standard did not prevent a further fall in the rate of exchange, which in 1894–95 reached its lowest level of a little over 1*s.* 1*d.* to the rupee; but during the next four years the rate rose steadily, and in 1898–99 the average was very nearly 1*s.* 4*d.* It was then determined to take the further step of making sovereigns and half-sovereigns legal tender at the rate of 1*s.* 4*d.* to the rupee, and this was done in September 1899. The Government did not accept any legal obligation to give gold for rupees; but its policy is to make rupees and sovereigns as far as possible convertible, and to allow the composition and volume of the currency to adjust itself automatically to the condition of trade through the ebb and flow of gold, and gold is freely given on demand as far as possible.

The Gold Standard Reserve.—It was decided that, with effect from 1st April 1900—

(1) the net profit on the coinage of new rupees should not be treated as revenue, but should be paid to a special reserve (now called the Gold Standard Reserve);

(2) the reserve should be held mainly in sterling securities, the interest being added to the reserve as it accrued.

From July 1906 a portion of the reserve has been held in India in rupees in order that the Government of India may be in a favourable position for meeting without delay in times of pressure heavy demands for the issue of rupees in exchange for sterling.

In 1907 it was decided that half of the net profit on coinage from 1st April 1907 should be used to supplement the funds available for capital expenditure on railways, the other half of the profit and the whole of the interest receipts being added to the reserve as before. This arrangement was, however, acted upon only in 1907–08 and 1908–09. In June 1912 it was decided that the interest on investments and the profits on coinage thereafter received, except profits retained in India for building up the silver branch of the reserve, should be held in gold at the Bank of England until the amount so held reached £5,000,000. No portion of the profit will be used for railway purposes until the total sterling assets of the Gold Standard Reserve amount to at least £25,000,000. The net profits on coinage transferred to the reserve in each year from 1900–01 to 1911–12 are shown in the margin. No coinage of new rupees from purchased silver took place during the last four years of the decade, and there was consequently no profit available for transfer to the reserve during that period, with the exception of small payments of arrears.

	£
1900–01	3,031,294
1901–02	415,100
1902–03	264,028
1903–04	2,627,575
1904–05	1,790,380
1905–06	3,677,880
1906–07	4,014,426
1907–08	1,123,603
1908–09	51
1909–10	25,190
1910–11	—
1911–12	—
Total	16,969,527

(Finance.)

Up to the 31st March 1912 there was a net profit of £2,105,868 on investments; £2,958,133 had been received as interest and discount, while the securities held had depreciated to the extent of £680,702, and losses amounting to £153,083 had been incurred on the sale and redemption of securities. Miscellaneous charges had amounted to £18,480.

The total amount of the reserve (including receipts on account of interest) on the 31st March 1912 was thus £19,075,395, made up as follows :—

	£
Sterling securities (selling price, 31st March 1912) -	16,067,383
Silver (coined rupees in India) - - - -	1,934,302
Cash in England (placed by the Secretary of State in Council at short notice) - - - -	1,073,710
Total - - -	£19,075,395

Exchange.—The table in the margin shows the average rate of exchange (in pence per rupee) at which Council bills were sold in each year of the decade. The difference between the highest and lowest average rates was less than one-sixth of a penny. The steadiness of exchange during this period contrasts strikingly with the continual fluctuations of the years previous to 1898, of which the figures quoted in the first column of the table give some idea. The depression of exchange in 1908—the first serious depression since the adoption of the gold standard, during which the rate fell for a few days to 1*s.* $3\frac{11}{16}$*d.*—and the measures taken to deal with the situation, are referred to below.

Year.	Average Rate.	Year.	Average Rate.
1862–63 -	23·920	1902–03 -	16·002
1872–73 -	22·754	1903–04 -	16·049
1882–83 -	19·525	1904–05 -	16·045
1892–93 -	14·984	1905–06 -	16·042
1894–95 -	13·100	1906–07 -	16·084
1896–97 -	14·454	1907–08 -	16·029
1898–99 -	15·979	1908–09 -	15·930
1899–1900 -	16·068	1909–10 -	16·041
1900–01 -	15·975	1910–11 -	16·061
1901–02 -	15·988	1911–12 -	16·083

Council Bills.—As has already been stated, the Home expenditure is defrayed by the sale of Council bills (or telegraphic transfers), the regular demand for which is due to the fact that they enable merchants and bankers to make the payments in India that are required mainly in consequence of the normal excess of India's exports over her imports. The actual amount drawn by the Secretary of State on India by means of Council bills in any year is not, however, determined solely by the net expenditure incurred in England chargeable to the revenues; and apart from other considerations the sale of bills at any time necessarily depends on the existence of a demand for them, and thus on the balance of trade. In times of active trade, it has been the practice for many years to sell bills and telegraphic transfers freely, subject to the condition of not selling so freely as to prevent the importation into India of such amounts of gold as the public appears likely to be able to absorb. There has been in force since January 1904 an undertaking that bills will be sold without limit of amount at 1*s.* $4\frac{1}{8}$*d.* per rupee. The total amount received in each year in respect of bills drawn is shown in the marginal table. In the latter half of 1907–08 and the first half of 1908–09 there was, owing to a number of causes, a departure from what may be called the normal state of affairs; exports fell off, and with them the demand for the Secretary of State's bills and transfers, and exchange was depressed. In these circumstances sterling bills on London to the amount of £8,058,000 were sold in India, at a fixed rate of 1*s.* $3\frac{29}{32}$*d.* per rupee, between March and September 1908, the bills being met from the proceeds of the realisation of a portion of the securities held on behalf of the Gold Standard Reserve, while the 120 million rupees thus withdrawn from circulation in India were paid into the portion of the reserve held in that country. Similar action was taken again in September 1909, to meet a

	£
1902–03 -	18,499,947
1903–04 -	23,859,303
1904–05 -	24,425,558
1905–06 -	31,566,972
1906–07 -	33,432,196
1907–08 -	15,307,061
1908–09 -	13,915,426
1909–10 -	27,416,586
1910–11 -	26,463,303
1911–12 -	27,058,549

Note—The figures given in the table on page 161 do not include bills drawn against the Gold Standard and Paper Currency Reserves.

temporary fall in exchange, but the bills sold on this occasion amounted to £156,000 only. With exchange restored to a normal level, the Secretary of State was able towards the end of 1908–09 to begin the process of replacing the securities held on account of the Gold Standard Reserve in England, which was completed during 1910.

Metallic Currency.—Though silver has ceased to be the standard of value, it remains the chief element in the metallic currency, and the rupee is still legal tender for any sum. Gold coins, generally speaking, represent values too great for ordinary Indian transactions, and it was not anticipated, when sovereigns were made legal tender, that gold would penetrate freely into the interior, or be used otherwise than exceptionally, save in the large centres and to some extent along the railways. There is, however, abundant evidence that during the last few years the use of gold as currency has been rapidly extending in some parts of India. The net imports of sovereigns, which for the first seven years of the decade averaged, amid great fluctuations, about £3,000,000 a year, rose in 1909–10 and 1910–11 to over £9,000,000 and over £8,000,000 respectively, and in the last year of the decade passed all previous records, amounting to over £18,000,000. The total for the decade was therefore approximately £57,000,000. The net addition to the stock of gold coin held by Government treasuries and currency offices over the same period having been nearly £9,000,000, the total absorption by the public may be put at, roughly, £48,000,000. Only a portion, however, of the gold absorbed passes into circulation as currency: some sovereigns are melted or used for ornaments, and a large quantity are no doubt hoarded, though it does not appear that the absorption of sovereigns is to any considerable extent accounted for, as has been suggested, by its replacing the rupee in hoards. But although the sovereign may not as yet have established itself to any very great extent as a permanent element in the general circulation, it is clear that in Northern India, Bombay, and part of Madras its use as currency is steadily increasing. In the marginal table, which shows the absorption of gold and silver coins by the Indian public year by year, the calculation is made on a different basis, by comparing the total balances held in treasuries and currency offices in India at the beginning and end of each year, allowance being made for any accretions to those balances by the import of sovereigns or new coinage. The absorption of gold coinage, as thus calculated, is less than that calculated from the net imports of sovereigns as shown by the Customs returns, the difference being attributed to the fact that large quantities of imported shield sovereigns, which are in special demand for ornaments and can be sold for more than their monetary value, do not, for that reason, pass through the currency offices. It appears that practically the whole of the sovereigns that have not a special value are passed through the currency offices. For the purpose, therefore, of considering the effect of gold imports on the currency, these figures of "absorption," which give a total of nearly £36,000,000 for the decade, may be taken as a starting point. The increase in the use of gold as currency is most noticeable in the Punjab, where it is reported that the sovereign is eagerly sought after and accepted by the agriculturists, and circulates extensively. Some further remarks as to the use of gold in that province will be found in the last chapter of this Statement (page 395). In other parts of India than those mentioned above, the sovereign appears still to be used mainly for conversion into ornaments or jewellery. If it could be used in the jute and rice trades as it is already used for wheat and cotton, its circulation would be increased enormously. Its use in the rice trade in Burma would displace notes principally, but silver is still the form of currency used in the jute trade. As a good jute crop always leads to a large absorption of rupees, it is evident that the cultivators are wealthy, so that the sovereign ought to be a suitable coin for them. But their intense conservatism bars the way, and it is considered probable that gold can be introduced in Burma for the rice trade before there is any hope of success in Bengal.

Year.	Gold (Millions of Pounds).	Silver* (Crores of Rupees).
1902–03 -	1·0	·02
1903–04 -	2·0	10·97
1904–05 -	2·2	7·43
1905–06 -	2·7	14·50
1906–07 -	3·85	18·00
1907–08 -	6·22	3·92
1908–09 -	2·44	*—14·88*
1909–10 -	·77	13·22
1910–11 -	7·19	3·34
1911–12 -	7·6	11·54

* Rupees and half-rupees only.

The question of undertaking the coinage of gold in India is under consideration. In view of certain difficulties attaching to the coinage of sovereigns at Indian mints, it has been suggested as an alternative that distinctively Indian gold coins of the denomination of, say, 10 rupees should be coined at Bombay.

The total net addition to the silver currency during the decade, as shown in the table, was about 68 crores (£45,300,000). Apart from new coinage, large quantities of rupees were coined and issued in substitution for old coin withdrawn from circulation.

If the absorption of all denominations of currency combined may be taken as a measure of the prosperity of the country, the year 1911–12 was the most prosperous India has known for a long time past. Including currency notes (7·56 crores), the total absorption of currency amounted to over £20,000,000 in value. The latest estimate of the total number of rupees in circulation being 180 crores, while gold and currency notes may be put at 60 crores each, the figures indicate that during the year the growth of the circulation of silver did not keep pace with the growth of circulation of gold and currency notes.

As regards the subsidiary coinage, mention should be made of the substitution of bronze for copper, in 1906, as the material from which pice, half-pice, and pie pieces are coined, and of the introduction of a nickel one-anna piece in 1907. The absorption of small coin (including under this head the silver quarter-rupees and one-eighth rupees) in 1911–12 was about £433,000 worth.

Paper Currency.—The period under review saw important changes in the law regulating the paper currency, and a great increase in the volume of the note circulation. At the beginning of the decade the note system was altogether local in character. There were head offices of issue at Calcutta, Madras, Bombay, and Rangoon, and subordinate offices at Allahabad, Lahore, Calicut, and Karachi. Each office of issue was the centre of a circle within which its notes were legal tender. The encashment of a note could be legally demanded only at the office of issue, or in the case of a note issued by one of the subordinate offices, at the corresponding head office, though, for the accommodation of the public, the various offices in practice cashed notes of other circles so far as they conveniently could. In March 1903 the first step was taken towards an Imperial system, and the 5-rupee note was made payable, and became legal tender, throughout British India, excluding Burma. The arrangement was extended to Burma in 1909. The Indian Paper Currency Act (Act II.) of 1910, which consolidated and amended the law relating to paper currency, "universalised" the 10-rupee and 50-rupee notes also. At the same time the sub-circle system was abolished, seven separate circles of issue being established with their headquarters at Calcutta, Cawnpore, Lahore, Bombay, Karachi, Madras, and Rangoon respectively, and the 20-rupee note was discontinued. The 100-rupee note was also made universal from the 1st April 1911. Notes of the following denominations are now issued: Rs. 5, Rs. 10, Rs. 50, Rs. 100, Rs. 500, Rs. 1,000, and Rs. 10,000. The table below shows the average total circulation of notes in each circle year by year, in round figures:—

Circle.	1901-02.	Average of 1902-3 to 1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.
	£	£	£	£	£	£	£
Calcutta -	8,585,000	10,918,000	13,657,000	11,678,000	13,485,000	15,027,000	15,575,000
Cawnpore* -	1,105,000	1,365,000	1,554,000	1,811,000	1,631,000	1,762,000	1,808,000
Lahore -	1,356,000	1,893,000	1,915,000	2,109,000	2,326,000	2,351,000	2,473,000
Bombay -	5,599,000	7,229,000	8,105,000	6,872,000	8,891,000	9,805,000	10,059,000
Karachi -	497,000	689,000	734,000	1,222,000	1,127,000	949,000	963,000
Madras -	2,104,000	2,818,000	3,590,000	3,697,000	3,664,000	4,217,000	4,630,000
Calicut† -	136,000	122,000	125,000	137,000	—	—	—
Rangoon -	641,000	1,100,000	1,868,000	2,151,000	1,982,000	2,120,000	2,736,000
Total -	20,023,000	26,134,000	31,548,000	29,677,000	33,106,000	36,231,000	38,243,000

* Allahabad up to 1908. † Absorbed in Madras from 1909-10.

(Finance.)

Except for 1908–09, the increase in the total was continuous throughout the decade, the Rangoon circle showing the largest proportional increase, owing mainly to the increased use of notes in connection with the rice trade. The figures of total circulation include large quantities of notes held in the Government treasuries and by the Presidency Banks. For the purpose of showing the extent to which notes are used by the public, these notes may more appropriately be left out of account. The marginal table shows the average total "active circulation," thus calculated, for each year. Similar figures for the separate circles are not available. More than three-quarters of the total number of notes in circulation at the end of the decade were for 10 rupees. The 5-rupee note has shown a great increase since it was made universal, and a similar increase is noticeable since they were universalised in the numbers of 10-rupee and 100-rupee notes. It may be said, generally, that the 5-rupee and 10-rupee notes are used for the most part in the ordinary way as currency, and that their use in this way is steadily increasing, while the bulk of the notes of the value of Rs. 100 and over are used in remittance or as a store of value.

Year.	Average Active Circulation.
	£
1902–03	15,660,000
1903–04	17,430,000
1904–05	18,740,000
1905–06	20,350,000
1906–07	22,620,000
1907–08	22,950,000
1908–09	22,070,000
1909–10	24,810,000
1910–11	25,830,000
1911–12	27,930,000

Paper Currency Reserve.—A reserve is held against the notes equal to their full value. Securities of the Government of India and of the British Government may, under the law now in force, be held as part of the reserve up to a total limit of £9,333,000, the amount in British securities being limited to £2,667,000; the remainder of the reserve must be held in gold or silver coin or bullion. On the 31st March 1912 the value of notes in circulation was £40,908,400, and the constitution of the Paper Currency Reserve was as follows :—

	£
Gold	21,254,400
Silver coin	10,328,100
Silver bullion	52,500
Securities of the Government of India	6,666,700
Securities of the British Government	2,666,700
	40,968,400
Deduct amount due on bills drawn by one circle on another	60,000
	£40,908,400

Banks.—The Government of India may itself be regarded in present circumstances as being in fact the great banker of the country, since it holds the greater part of its own cash balances, has the sole control of the paper currency, and controls exchange by its transactions with the Secretary of State. At the head of the banking institutions are the Presidency Banks of Calcutta, Madras, and Bombay, which are bodies corporate, constituted under the Presidency Banks Act of 1876. This Act, as modified by subsequent Acts, regulates the constitution and management of the banks and prescribes the kind of business that they may undertake. The most important statutory restrictions are that they may not borrow out of India, nor draw, discount, buy, or sell bills of exchange, or other negotiable securities payable outside India or Ceylon, except that, when they receive interest, or the proceeds of the sale of securities, on behalf of their principals, they may draw bills of exchange or grant letters of credit, payable out of India, for the purpose of remitting such interest or proceeds at the risk of the principals. The effect of these restrictions is to prevent the Presidency Banks from dealing in foreign exchanges or otherwise employing their capital out of India.

The Presidency Banks, in accordance with the provisions of agreements into which the Government of India has entered with them, act as bankers for the Government of India, paying and receiving money on its behalf and managing the public debt; they receive in return a fixed annual payment, and a commission on the amount of the public debt which they manage. The Government also undertakes to keep a minimum balance at each bank, or, failing this, to pay interest on the deficiency.

The following table shows the extent of the business of the Presidency Banks at the end of December 1912:—

	Bank of Bengal.	Bank of Madras.	Bank of Bombay.
	£	£	£
Paid-up capital	1,333,333	500,000	666,667
Reserve	1,220,000	466,667	706,667
Public deposits	1,321,069	504,838	698,952
Other deposits	11,069,588	4,956,050	7,462,175

The business connected with the remittance of money to and from India is chiefly in the hands of certain large banks, with head offices situated outside India, generally known as the Exchange Banks. The greater part of their capital is, however, employed out of India.

The total number of joint stock companies registered as engaged in banking or loan operations in British India and Mysore on the 31st March 1912 was 491, with a total paid-up capital of £5,246,000. The majority of these companies were societies with a comparatively small capital. Nearly half of them were in Madras.

Some idea of the progress of banking capital in India in recent years may be gathered from the tables below, the first of which relates to the Presidency Banks and the larger joint stock banks whose head offices are located in India, and the second to the Exchange Banks. Banks of deposit which, though doing business on western lines, do not possess a minimum of £33,000 of paid-up capital and reserve fund combined are left out of account, as are also the numerous small money-lending and pawnbroking establishments registered annually as "banks" under the Indian Companies Act.

THREE PRESIDENCY BANKS AND (IN 1911) 18 JOINT STOCK BANKS WHOSE HEAD OFFICES ARE LOCATED IN INDIA.

Year.	Capital.	Reserve and Rest.	Deposits.			Cash Balances at Head Offices and Branches.
			Presidency Banks.		Other Banks.	Total.	
			Public.	Private.			
	£	£	£	£	£	£	£
1901	3,003,745	1,760,827	2,266,959	9,757,846	6,000,945	18,025,750	5,471,214
1906	3,292,935	2,241,669	2,052,348	18,300,559	7,703,268	28,056,175	8,297,179
1911	4,304,005	3,112,929	2,921,992	22,799,926	16,860,737	42,582,654	11,468,327

EXCHANGE BANKS WHOSE HEAD OFFICES ARE NOT LOCATED IN INDIA.*

Year.	Capital.	Reserve and Rest.	Deposits.		Cash Balances at Head Offices and Branches.	
			Out of India.	In India.	Out of India.	In India.
	£	£	£	£	£	£
1901	11,655,599	4,172,101	57,818,643	7,867,355	11,882,315	2,237,993
1906	15,866,592	8,421,339	104,456,710	12,058,216	18,435,610	3,403,919
1911	22,600,058	13,001,556	157,764,440	18,779,316	22,136,195	3,046,101

The figures show that there was during the decade a very great increase in the amount of capital deposited in the banks and so made available for the financing of commercial and industrial operations.

* Ten banks throughout the greater part of the decade. Twelve in 1911.

CHAPTER XI.

LAND REVENUE AND TENURES.

The land revenue system and the laws regarding land tenures are matters of immediate interest to a great majority of the population of India, and the most important branch of administration in every province is that connected with the assessment and collection of land revenue, and with the numerous subsidiary questions arising in regard to land. In spite of the gradual development of other forms of industry, agriculture continues to hold by far the most important place, and a large proportion of workers on the land either own or lease the land that they work. Apart, therefore, from its purely financial aspect—as was shown in the last chapter, it provides about a quarter of the total gross revenue—the land revenue and its administration are of great importance from the social and political points of view. The present chapter deals also with other questions arising out of the ownership and occupancy of land—such as the relations between landlords and tenants, restrictions on the alienation of land, and the Courts of Wards. In all these matters there are great differences between the various provinces, and often between different parts of the same province, and for the purpose of detailed consideration the provinces must be dealt with separately. An attempt may, however, first be made to indicate as clearly as is possible in a brief space the principles and methods that in a general way underlie the various systems in force. It is to be borne in mind that to almost every general statement there are numerous exceptions, and that the actual details of revenue work are characterised by a variety and intricacy that no general description can reproduce.

The land revenue of modern India is a form of public income derived from the immemorial custom of the country. In its primary shape it was that portion of the cultivator's grain-heap that the State annexed for the public use, and this crude method of realising the bulk of the State income appears to have been practically the only method in force throughout the greater part of India until the sixteenth century. Revenue is indeed still levied in this manner in many of the native states, and there are large tracts where rents are so taken by landlords. Under the Mughal rule, cash payments—fixed, when possible, for a period of years—were to a large extent substituted for payment in kind; but under later rulers the collection of land revenue became practically little more than a disorganised scramble for the greatest amount of income that could be wrung from the land. As the several provinces came under British control, their assessments were gradually reduced to order, the systems selected being at first tentatively adopted according to the varying circumstances of the different tracts, and becoming more and more crystallised as time went on.

Zamindari and Ryotwari Tenures. — A number of different systems were thus evolved on lines that were for the most part mutually independent. It is usual to differentiate them roughly on broad lines according to the status of the person from whom the revenue is actually demanded. When the revenue is assessed on an individual or community owning an estate, and occupying a position identical with, or analogous to, that of a landlord, the assessment is known as *zamindari*; when the revenue is assessed on individuals who are the actual occupants, or are accepted as representing the actual occupants, of smaller holdings, the assessment is known as *ryotwari*. The distinction has its historic origin in the varying degrees in which, in different parts of the country, tribal occupation of territory had superseded the rights of the ruler, or full proprietary rights had been granted to the individual. Under *zamindari* tenure the land is held as independent property; under *ryotwari* tenure it is held of the Crown in a right of occupancy, which is, however, under British rule, both heritable and transferable. Under either system there may be rent-paying sub-tenants. The *zamindari*, or landlord, system prevails in Bengal, the United Provinces, the Punjab (proprietary cultivating communities), and the Central Provinces—over rather more than a half of British India altogether—and the *ryotwari*, or peasant proprietary, system in Bombay, Madras, Assam, and Burma. In the Punjab and the United Provinces the present tendency is for co-sharers to divide their responsibilities and become directly responsible to Government for their separate shares.

Permanent and Temporary Settlements. — A second general distinction is that between the areas in which the assessment is permanently fixed and those in which

it is fixed for a period of years only. In 1793 the assessment in Bengal was declared to be fixed in perpetuity, and the settlement then made, with some subsequent additions, constitutes what is known as the Permanent Settlement of Bengal. Shortly afterwards the permanent system was extended to the Benares districts (now in the United Provinces) and to certain portions of the Madras Presidency. Under these arrangements, areas making up altogether about one-fifth of British India are permanently settled. In the remaining areas assessments are fixed for a period of years, the ordinary term at the present time being 30 years in Bombay, Madras, and the United Provinces, and 20 years in the Punjab and Central Provinces. In backward tracts, such as Burma and Assam, and in exceptional circumstances, such as exist in Sind, shorter terms have hitherto been permitted, but the 20-year period is being adopted in Burma and Assam.

The following table shows the position in the surveyed areas of the various provinces, as regards the forms of land tenure, in 1911–12, as stated in the Agricultural Statistics. The figures include waste and uncultivated areas as well as cultivated lands, and merely indicate roughly the extent to which the different systems respectively prevail.

Figures in Thousands of Acres, omitting 000.

Province.	*Ryotwari* (Peasant Proprietors).	*Zamindari* (Individual Proprietors or Village Communities).		Total.
		Permanently settled.	Temporarily settled.	
Burma	108,799	—	—	108,799
Assam	25,916	3,930	1,459	31,306
Bengal	—	38,789	10,780	49,569
Bihar and Orissa	—	41,452	11,760	53,212
United Provinces of Agra and Oudh	—	7,541	60,793	68,334
Punjab	—	—	62,215	62,215
North-West Frontier Province	—	—	8,438	8,438
Bombay	44,876	—	3,754	48,629
Sind	30,257	—	—	30,257
Central Provinces	1,837	—	40,639	42,476
Berar	11,327	—	—	11,327
Madras	61,577	29,179	—	90,756
Ajmer-Merwara	—	974	797	1,771
Coorg and Manpur*	1,044	—	—	1,044
Total	285,633	121,865	200,635	608,133

* Manpur is an isolated British *pargana* in Central India.

The general features of the land revenue administration, whether *zamindari* or *ryotwari*, may be noted under three heads: (1) the preparation of the cadastral record, (2) the assessment of the revenue, and (3) the collection of the revenue so assessed. The processes coming under the first two heads are known collectively in most provinces as the "settlement" of the land revenue, and the officer who carries them out is known as the "settlement officer." During the last twenty or thirty years the object of shortening and simplifying settlement procedure has been kept steadily in view. Thus each province has a Land Records staff which, as is noted below, keeps the village maps and records up to date and preserves the survey boundary marks, and in other respects changes have been made that help to reduce the volume of work to be undertaken when a settlement is revised. Settlements, or re-settlements, in new or in temporarily settled areas are always in progress. In consequence of the attention now given to the maintenance of the village records, and of improved methods, the process occupies a much shorter period than formerly, and involves comparatively little harassment of the people. The duties of the assessing staff entail a minute local inspection from village to village through large tracts of country, and there are few officers of Government who are thrown more into contact with the people, or have greater opportunities of understanding their wants and feelings, than the settlement officers. Settlement operations of any importance are now everywhere carried out by members of the Indian Civil Service, or persons of like status, who are placed on special duty for the purpose.

(Land Revenue and Tenures.)

The Cadastral Record and Record of Rights.—An essential preliminary to the assessment of land is the preparation of a cadastral map. In Bengal, where the revenue was permanently assessed in 1793, the assessment rests on information obtained without the aid of a survey; but this defect has given rise to inconveniences both fiscal and administrative, and it was found necessary in 1891 to introduce a cadastral survey and record in the Bihar districts in order to regulate the relations of landlord and tenant. In other provinces the existing assessments are based almost without exception on a field to field survey. The maps were until recently prepared in some instances by the scientific staff of the Survey Department; in others the skeleton data alone were so provided, the rest of the work being plotted by a local staff. All cadastral survey work is now done by the provincial land records and settlement departments. A separate map is usually prepared for each "village," the village in India being a tract of land corresponding in some ways to the "parish" in Great Britain. The cadastral map having been completed, the record of holdings is drawn up. This is primarily a fiscal record, the object of which is to show from whom the assessment of each holding is to be realised and the amount in each case. But the determination of these matters is closely bound up with the general question of land tenures, and it has been usual to supplement entries in this record, either by additional entries or by a separate record, in such a way as to show to a greater or less extent the existing rights in, and encumbrances on, the land. In most of the provinces where such a record of rights is prepared, it is given by law a presumptive force, being held to be correct until the contrary is proved. Arrangements are now in force in most provinces by which the cadastral records are revised either annually or at short intervals in such a way as to maintain the accuracy of the record, and there is thus being gradually built up a very extensive and complete system of registration of title by public entry.

The Assessment of the Land Revenue.—The revenue is levied by means of a cash demand on each unit assessed. Under the *zamindari* system, the demand is assessed on the village or estate, which may be owned by a single proprietor, or by a proprietary body of co-sharers jointly responsible for payment of the revenue. The demand is a definite sum payable either in perpetuity or for a fixed term of years, during which the whole of any increased profits due to extension of cultivation, enhancement of rents, &c., is enjoyed by the individual landlord or the proprietary body. Under the *ryotwari* system, the assessment is on each field as demarcated by the cadastral survey. It takes the form of revenue rates for different classes of land, which are settled for a term of years; and, as the occupant may surrender any portion of his holding, or obtain an unoccupied field, the total sum payable by him as revenue may vary from year to year. The earliest cash assessments were the equivalents of fractional shares of the gross produce of the land; but it is unnecessary here to refer to the estimates that have been made of the fractions of the gross produce represented by the existing rates of land revenue, beyond saying that it is clear that Government now takes a very much lower share of the gross produce than was customary in pre-British days. Except in Bombay, where the assessment is not fixed in terms of the produce at all, the revenue throughout India is assessed so as to represent a share, not of the gross, but of the "net produce" (in *ryotwari* areas; "net assets" in *zamindari* areas). The meaning of the term "net produce" or "net assets," as employed for the purposes of assessment, varies in different parts of India. In Northern India and in the Central Provinces it represents the rent, where rent is paid, or that portion of the gross produce which would, if the land were rented, be taken by the landlord. In Madras and Lower Burma, on the other hand, where Government deals, as a rule, direct with the cultivator, the net produce is the difference between the assumed value of the gross produce and a very liberal estimate of the expense incurred in raising and disposing of the crop. Speaking generally, the "net assets" represent a larger share of the produce in Burma and Madras, where no middleman intervenes between the peasant proprietor and the Government, than they do in Northern India. There is no hard and fast rule as to the proportion of the net assets to be taken as land revenue, but approximate standards, which differ somewhat from province to province, are laid down in the instructions to assessing officers. For India as a whole it may be said that the standard share of the calculated net assets or produce to be taken by Government is approximately one-half. Apart, however, from the fact that the net produce is usually calculated on very moderate lines, the share actually taken is more frequently below than above one-half. In the application

of the standard rates to individual cases, considerable play is given to the working of local considerations and to the judgment and discretion of the assessing officer.

The distinguishing and essential feature of the assessments of Bombay is that they rest on the principle of adhering to what are known as "general considerations" rather than to statistical calculations of the net produce. The factors taken into account include the nature of the soil, the economic conditions of the tract, the past revenue history, prices, and the selling, letting, and mortgage value of the land.

The general rule that the assessment is (for the term of a settlement) a fixed cash demand, representing the revenue fairly payable on an average of a series of seasons, is subject to some modification in precarious tracts, in regard to which the principle of a fluctuating assessment, by which the demand fluctuates year by year under rule, has been accepted and applied to some extent by most local Governments. The fluctuating assessment usually takes the form of acreage rates on the areas sown or matured in each harvest, the rates so imposed being, like the fixed lump assessment, unchangeable for a period of years.

In Madras there are "season remission rules," the effect of which is to adjust the revenue demand to some extent, particularly in the case of irrigated fields, to the character of the crop grown in a particular season.

Various provisions are made in the different provinces for exempting from assessment, either permanently or for a term of years, increases of income due to improvements—such as wells, tanks, and embankments—made by private individuals; for the grant of favourable terms to cultivators who take up and clear waste land; for the avoidance of sudden enhancements of the land revenue demand; and for the relief from over-assessment of holdings which have suffered deterioration since they were assessed.

The collection of the Revenue.—Little of a general nature need be said as to the collection of the revenue. Owing partly to the prevailing lack of capital among the agricultural population, the land revenue is generally recovered not by a single annual payment, but in instalments, the dates and amounts of which are fixed to meet local circumstances. For the recovery of sums not paid by due date the Government has extensive powers conferred by law. As a rule, a writ of demand or threat of attachment serves to bring about without further trouble the payment of such sums as are in arrear, and the more serious procedure of sale is comparatively seldom resorted to. Contumacious defaulters may be arrested and detained, but the number of persons actually confined is small.

Suspensions and Remissions.—It has been mentioned above that the rigidity of fixed assessments has been modified, and the demand of each year apportioned more closely to the out-turn from which that demand is paid, to some extent, by the adoption of fluctuating assessments. In areas that are under a fixed assessment, although that assessment represents an amount fairly payable on an average, experience has shown that the landholder cannot be counted on to lay by in good seasons enough to meet the revenue demand in very bad years, and it has been customary of late years in most provinces to grant with greater freedom, as necessity arises, a postponement of the whole or part of the demand on a harvest, and even, in cases where ultimate recovery would entail real hardship, to allow an absolute remission of the demand. Thus in 1899-1900 and 1900-01 the collection of revenue to the amount of £1,376,000 was suspended in the districts affected by famine, and at the conclusion of the famine in 1902 no less than £1,321,000 was entirely remitted. Over £500,000 was remitted in the United Provinces in 1908.

The Government of India in a Resolution dated the 25th March 1905 laid down the principles to be followed by local Governments in order to bring the local rules for the suspension and remission of land revenue into conformity. The general view expressed was that while it was wholesome and legitimate to expect the cultivator to take the bad with the good in years of ordinary fluctuation, it was hopeless to expect him to be able to meet the fixed demand in years when the crops barely suffice for his own sustenance, and that payments should not be enforced under conditions which would compel a cultivator of ordinary care and prudence to imperil his future solvency in order to meet them. General rules for carrying this view into effect in various circumstances were laid down. It was decided to adhere to the conclusion arrived at in 1882 (when previous instructions for modifying, where necessary, the strict system of revenue assessment and collection were issued) and endorsed by the Famine

(Land Revenue and Tenures.)

Commission of 1901, that "relief will not ordinarily be required when there is half a normal crop." On the other hand, it was suggested that total relief should be given where the crop is less than a quarter of the normal. The principle was accepted that as a general rule no suspended revenue should be collected until after one fair harvest subsequent to the failure has been reaped in the affected tract. It was further laid down that no relief should ordinarily be given to the revenue-payer of the landlord class unless it can be ensured either by legislation or by arrangement that a proportionate degree of relief will be extended to the actual cultivators of the soil, or at least to the tenant class. Local Governments were requested to examine their existing rules in the light of the various principles now laid down, by the adoption of which, the Government of India believed, the administration of the fixed land revenue system of India would be freed from the evils of excessive rigidity that had in some places hitherto attached to it, and a degree of elasticity would be introduced sufficient to ensure that in times of agricultural calamity the burdens of the cultivating classes would not be aggravated by any unreasonable insistence on the demands of Government.

Incidence of the Land Revenue.—The table below shows for the larger provinces, so far as the figures are available, the average incidence of the land revenue assessment on the land and on the population at the beginning and end of the decade. The rates of revenue vary greatly with the productive power of the soil, advantages

	Incidence (in Rupees and Annas) of Land Revenue Assessment in fully assessed Area.			
	Per Acre of cultivated Area.		Per Head of Population.	
	1901–02.	1911–12.	1901–02.	1911–12
	Rs. a.	Rs. a.	Rs. a.	Rs. a.
Upper Burma	1 13	1 9	2 2	1 13
Lower Burma	2 4	2 14	—	—
Assam :				
Ryotwari	2 7	1 15*	—	—
Zamindari, temporarily settled	—	—	—	—
Zamindari, permanently settled	1·5*	1·5*	—	—
Bihar and Orissa :				
Permanently settled	—	8	—	8
Temporarily settled	—	1 1	—	
Bengal :				
Permanently settled	12	15	—	11
Temporarily settled	1 8	1 12	—	
Agra :				
Temporarily settled	1 13	1 14	1 9	1 9
Permanently settled	1 10	1 8	1 3	1 1
Oudh :				
Temporarily settled	1 14	2 0	1 7	1 8
Permanently settled	1 1	1 1	1 4	1 5
Punjab	1 1	1 4	—	—
North-West Frontier Province	13	15	—	—
Sind	2 7	2 16	—	—
Bombay :				
Ryotwari	1 5	1 10	2 8	2 8
Zamindari	1 14	14	1 0	1 4
Central Provinces :				
Ryotwari	7	9	—	—
Zamindari	9	10	—	—
Berar	1 3	1 6	2 15	3 0
Madras :				
Ryotwari	2 5	2 7	1 13	1 14
Zamindari, permanently settled	4*	15	11	12

* Figures for cultivated area not available. The figures given are for the total fully assessed area.

of climate and irrigation, and facilities for marketing produce. The most noticeable features are the low rates in the permanently settled areas and in the Central Provinces. In Madras and Sind the land revenue rates include the charges for irrigation.*

* *See* page 316.

Tenant-Right.—By the ancient custom of India the occupiers of the soil had the right to retain their holdings, so long as they paid the rent or revenue demandable from them. In Southern India, where most of the land is held by petty occupiers direct from the State, this custom has been respected from the beginning of British rule; and in both the permanently and temporarily settled districts of Northern India a considerable degree of protection has now been given to the tenants or ryots. Up to 1859 tenant-right had not been adequately safeguarded by law, and for the great Province of Bengal the Court of Directors reported in 1858 that "the rights of the "Bengal ryots had passed away *sub silentio*, and they had become, to all intents and "purposes, tenants-at-will." Since 1858 laws have been passed which make the petty occupiers of Madras, Bombay, Burma, and Assam proprietors of their holdings, subject to the payment of a moderate land revenue; and the petty proprietors are protected against future enhancements of land revenue on account of improvements effected by themselves. For nearly every other province in India laws have been passed securing tenant-right to all occupiers of any standing, prohibiting eviction or enhancement of rent save by consent or by decree of Court on good cause shown, and granting the ryots power to bequeath or sell their tenant-right.

The extent and character of the tenant-right declared or created by these laws vary in the different provinces; tenant-right is strongest in the Central Provinces, where the old land tenures were not very unlike the petty proprietorships of Bombay; it is less important in the Punjab, where the bulk of the land is occupied by proprietary brotherhoods, and the holdings of rent-paying tenants are comparatively small, and it is weak in Oudh, where the position of the talukdars or superior proprietors was exceptionally strong, and had been confirmed by the British Government. The position of tenants or occupiers in every province is better and more secure than it was fifty years ago. In permanently settled Bengal the Tenancy Act of 1885 has greatly strengthened and improved the position of the ryot; and the cadastral survey which is being carried out in the province shows that the great bulk of the ryots enjoy tenant-right under the law. Thus Lord Cornwallis's intention in favour of the ryots, promulgated more than 100 years ago, has, so far as changed circumstances permitted, been at last carried into effect, for the rights of the occupiers of the soil have been in great part secured; and this has been done without injustice to the Bengal landlords, whose gross rental has increased four or five fold during the century, and has in many tracts more than doubled during the past fifty years.

Throughout considerable parts of India, it may be added, the Government has power to ensure the suspension or remission of rent to meet cases of crop-failure.

Revenue Surveys and Settlements and Land Records.

Bengal, Bihar and Orissa, and Assam.—The greater part of the land revenue of Bengal (including Bihar and Orissa) was permanently settled at the end of the eighteenth century. At the present time the land revenue in Bengal represents less than a quarter of the total rental. The settlement of 1793 did not extend to the whole province, and the tracts then omitted, as well as those acquired since, such as Orissa and Darjeeling, and also many alluvial islands and estates that have escheated, or have been purchased from time to time by Government at revenue sales, are temporarily settled. Survey and settlement operations were in progress in various parts throughout the decade, and good progress was made with the cadastral survey and record-of-rights of permanently settled areas begun in 1891. The power to order a survey and record-of-rights in any local area was given by the Bengal Tenancy Act of 1885; the institution of operations in the permanently settled tracts was a most important step, the object being to frame an authoritative record of the status and rents of the tenants, with a view to protect them against arbitrary eviction and illegal enhancement, and to compose or avert agrarian disputes. It is reported that the manifold advantages secured by the preparation of a trustworthy map and record-of-rights are now generally acknowledged, both by landlords and tenants. In September 1902 the total area for which a record-of-rights had been completed was 29,610 square miles, out of a total of 151,185 square miles of British territory in Bengal, as then defined. By September 1911 the record-of-rights had been completed for 64,805 square miles out of the reduced total area of 116,175 square miles. The areas dealt with by the Settlement Department in Bengal during the decade thus

(Revenue Surveys and Settlements and Land Records.)

fell mainly under four heads: (1) temporarily settled estates, where a settlement of land revenue and rents is necessary in addition to the record-of-rights; (2) permanently settled estates in the Sonthal Parganas, where, besides the preparation of a record-of-rights, the rent of every tenant had to be settled; (3) other permanently settled tracts, where the work consists of the preparation of a record-of-rights and the decision of agrarian disputes, the settlement of fair rents being made only on the application of landlords or tenants; and (4) the temporarily settled portion of Orissa, in which the revision of the last cadastral survey and record-of rights was taken in hand in 1906 in order to bring them up to date with a view to their being then continuously maintained. The survey and preparation of a record-of-rights in the Sonthal Parganas, begun in 1898, were completed in 1910. The rent of every tenant and headman in this large area (over 5,000 square miles) was thus settled, and the respective rights of landlord, headman, and ryot in every village clearly defined. The result was an increase of about £6,000 a year in the Government revenue, while private proprietors also obtained material enhancements of their rent-rolls. Rent-rates are nevertheless still low, and the rents are reported to be paid cheerfully in all cases.

In Eastern Bengal, as in Bengal, it is now the settled policy of Government to prepare and keep up to date a record-of-rights not only where the land revenue is subject to periodical revision, but also throughout the whole permanently settled area. Survey and settlement operations were in progress in various districts during the decade. Up to September 1911, the cadastral survey and record-of-rights had been completed in 8,109 square miles in Eastern Bengal and 9,369 square miles in Assam, and operations were in progress during 1910–11 in a further area of 8,385 square miles in Eastern Bengal; the outstanding areas were, 23,345 square miles in Eastern Bengal and 27,152 square miles in Assam.

In Assam only a comparatively small part of the country is permanently settled, the rest being Government property; the ordinary land tenures vary considerably in different parts, while several varieties of special waste land tenures, granted by Government at different periods, exist in all the plains districts. In the Sylhet and Goalpara districts a large proportion of the area is permanently settled. The distinguishing features of the agricultural system of Assam proper are the large areas of unsettled waste land, and the system under which in certain tracts land is cultivated for two or three years and then resigned. These two conditions necessitate a simple system of land revenue administration, the ryots holding under an annual or decennial lease from Government. In the hill districts there is, except in a few isolated tracts, no land revenue settlement properly so called. The ordinary form of taxation in these parts is a house-tax. The decennial settlement of the Assam Valley districts being about to expire, resettlement operations were inaugurated in 1902 on a new system, known as the "soil-unit" system, by which the assessment of the land revenue is, as far as possible, fixed by the people themselves, with reference to the popular estimate of the relative values of the different classes of soils and of the relative natural advantages of different areas. In none of the districts was the revenue demand greatly enhanced; in the Kamrup district, which was leniently treated in view of the severity of the effects of the earthquake of 1897, the final result was a total abatement of 2⅓ per cent.

United Provinces.—In the Benares Division the land revenue was permanently settled, as has been mentioned above, at the end of the eighteenth century. Elsewhere in the United Provinces the ordinary term of a settlement is 30 years. In the assessment of revenue the rule is that the State demand should be, approximately, one-half of the rental "assets." The second regular settlement in Oudh was carried out between 1893 and 1903. Extensive resettlement operations were carried through also in Agra in the earlier years of the decade, the results varying between an increase of the revenue-demand to the extent of 34 per cent. in Meerut and a decrease of over 14 per cent. in Cawnpore. In Bundelkhand the settlement was revised under special rules, providing for a fluctuating assessment. Regular settlements were in progress in two districts during the year ending in September 1912. The department of land records was credited with steady and improved work, and it was decided, in connection with settlements recently commenced, to dispense with a professional survey and to accept the existing maps corrected and brought up to date by the *patwaris*.

Punjab.—In the Punjab, as in Bengal and the United Provinces, the system of land tenures is that known as *zamindari*. The *zamindars* in an estate are technically bound by a common responsibility towards Government in the matter of

the land revenue, but the tendency is towards individualism, and with lighter and more elastic assessments the enforcement of collective responsibility has become practically obsolete. In practice the owner, or owners, of each holding is, or are, assessed separately. The term of a settlement is now usually 30 years in the case of fully developed districts, and 20 years where conditions are less advanced. There has been a considerable extension in recent years, especially on river-side areas and in rainless tracts of the Western Punjab, of the "fluctuating" system of assessment, under which the fixed cash assessment is replaced by cash acreage rates on the actual area cropped at each harvest. The assessment is calculated on the net "assets," but competition rents are rarely paid in cash, and in the more usual case of kind-rents the value of the "assets" can be arrived at only after a number of elaborate and somewhat uncertain calculations as to prices, yields, &c. Although, therefore, the standard of assessment is represented, as in the United Provinces, by one-half the net "assets," the standard is looked upon not as determining the average assessment, but as fixing an outside maximum. The assessments in the Punjab have generally been noted for their moderation. A return laid before Parliament in 1908* gave in detail the results of settlement operations in the Punjab from 1855 onwards. It showed that the rate of land revenue per cultivated acre, measured in rupees, had not varied much, and that its incidence measured in gold had therefore greatly decreased.

Resettlement operations, resulting in moderate additions to the revenue demand, were carried through during the period under review in a number of districts. Increases of assessment amounting to 208 and 109 per cent. respectively in the Lower Jhelum Colony and part of Lyallpur, as a result of resettlements concluded in 1911–12, may be taken as evidence of the remarkable prosperity of the Canal Colonies. The superseded assessments in these cases were initial and tentative arrangements. The records-of-rights are reported to have been kept in good condition.

North-West Frontier Province.—The land tenures, and the method and standard of assessments, in the settled districts of the North-West Frontier Province generally resemble those of the Punjab. Of the Agencies only Kurram and the Tochi valley pay land revenue. In Dera Ismail Khan a large tract is under fluctuating assessment. Of the five settled districts four were under resettlement during the first half of the period under review. The first regular settlements of the Tochi and Kurram Agencies were also carried out during the earlier part of the decade. The resettlement operations, which were brought to a close in 1907, resulted in a very considerable increase in the assessment, amounting to 60 or 70 per cent. in Bannu and Hazara. Dissatisfaction resulted, and after an inquiry it was decided that the enhancements, although defensible from a purely revenue point of view, were too high and too sudden. Some part of the demand was accordingly remitted in those cases where it was found to be too heavy.

Central Provinces and Berar.—The series of resettlements throughout the Central Provinces begun in 1885 were preceded by an accurate cadastral survey, and a detailed record of tenures, rent, and character of cultivation for every field. In addition, a list was drawn up showing for every field the quality of its soil, and its position whether favourable or unfavourable for cultivation. The assessment was on the "soil-unit" system. Settlement operations in the Central Provinces now include the fixing of practically all tenants' rents (the province, apart from Berar, includes, as will be seen from the table on page , only a small *ryotwari* area). The average increase in the rent-roll over that at the previous settlement was 55 per cent., but the average actual increase of rents at revision, taking into account enhancements made by the proprietors during the currency of the settlement, was much less—about 14 per cent. The fraction of the proprietor's income or "assets" taken as revenue in the *malguzari* area was generally smaller than at the preceding 30 years' settlements, averaging, for 16 districts, 56 per cent., as against 62 per cent. in 1863. In the *zamindari* estates the revenue does not exceed, as a rule, 40 per cent. of the "assets." The period now adopted for land revenue settlements is 20 years, but in order that the new settlements may expire in rotation, they have actually been made for terms ranging from 12 to 23 years. As a result of the series of partial or total failures of the harvest that preceded the opening of the period under review, the settlements were modified by making regular abatements of revenue for a period of

* Cd. 3991 of 1908.

(Revenue Surveys and Settlements and Land Records.)

years in all the affected districts. Settlement operations were carried on in a number of districts during the decade; they call for no special remark.

Berar is settled on the Bombay *ryotwari* system. A revision of the settlement was almost completed at the beginning of the decade. The preparation of a complete and authoritative record-of-rights, now to be introduced into Berar, was commenced, and carried through for four *taluqs*, in 1911-12.

Ten settlements were in progress in the Central Provinces in 1911–12, and six were completed. The revised rents and revenues announced during the year are reported to have been cheerfully accepted everywhere.

Burma.—Burma differs from the provinces so far dealt with in that the prevailing form of land tenure is *ryotwari*. As a general rule the agriculturist is a peasant proprietor, who makes all payments in respect of the land he works directly to the State. The whole of the province has not yet been brought under regular settlement, but of the cultivated area of Lower Burma only a comparatively small portion remains unsettled. The completion of the Pakokku settlement in 1910 brought the number of settled districts to 32 out of a total of 37; the five unsettled districts are hilly and sparsely cultivated, and it was decided that settlement in their case was not at present necessary. The term of a settlement has in the past been generally not more than 15 years. Since 1908, however, the ordinary term has been fixed at 20 years. The theoretical maximum assessment may be taken as being 50 per cent. of the net produce, but the actual rates have been, as a rule, much lower. In Upper Burma the assessment is levied, under the "fluctuating" system, on matured crops only, and in Lower Burma land left uncultivated may for the time being be assessed at a nominal fallow rate. Settlement operations, both original and revisionary, were going on throughout the decade; the latter had the result, generally speaking, of bringing the previously very low assessments in Lower Burma up to, or near, the standard level, and thus resulted in considerable enhancements. In Lower Burma the cycle of third settlements has been commenced.

Madras.—Nearly a third of the Madras Presidency, made up of districts in the north, is permanently settled on the *zamindari* system. Over the rest of the Presidency (leaving out of account the comparatively small areas held under various special tenures) *ryotwari* tenure prevails. The basis of the latter system is the division of the whole area into fields, each field being valued at a fixed rate per acre and the assessment settled thereon. The first stage is soil classification; certain food-staples are then selected as representative, and the average out-turn is ascertained by numerous measurements; the out-turns are valued by a commutation-rate rather—sometimes much—below the average of prices for the previous 20 non-famine years; large deductions are made for the difference between market and village prices, and for vicissitudes of season and unprofitable patches, and the expenses of cultivation are subtracted. The "net produce" being thus arrived at, a nominal half (usually less) gives the rate of the assessment applicable to the particular soil in question. Finally the rates are compared with the existing rates and reduced if necessary. The amounts paid for sub-leases indicate that the nominal half is actually often a fourth and, on the richer lands, a sixth or even less proportion of the net produce. The term of settlement is 30 years. An annual settlement of accounts is held to ascertain and record any changes in the holdings, and any remissions under the "season remission rules" that exist in Madras. The important initial settlements in Malabar and South Canara, which were in progress at the beginning of the decade, were completed in 1905. Resettlement operations have also been going on in a number of districts. In eight districts the resettlement of which had been completed at the end of 1911-12, the total demand in 1910–11 was higher by about 22 per cent. than it was before the introduction of the new settlement. The Land Records staff was increased and improved in 1905 with a view to the more efficient maintenance of the records; but the work to be done before maintenance becomes current throughout the Presidency is still considerable.

Bombay.—In Bombay Presidency, outside Sind, the land revenue system is with few exceptions *ryotwari*, the settlement being with cultivators of small holdings whose revenue payments are fixed after careful measurement and classification of their lands. The assessment is based on a classification of fields according to soil, situation, and natural defects, such as liability to inundation and the like. The fields being classed, villages are grouped with reference to their nearness to markets, to means of communication, and other economic conditions. Maximum rates for the groups are fixed with regard to these considerations and to average prices. The assessment on any field is then determined as a proportion of the maximum depending upon the

class to which it belongs. The term of a settlement is 30 years. Since 1884 it has been laid down as a general rule that at revision settlements the increase of revenue shall not exceed 100 per cent. on an individual holding, 66 per cent. on a village, or 33 per cent. on a group of villages. Besides the *ryotwari* tenure, there are a number of other forms of tenure with which it is impossible to deal here. In Sind the land is held by a large number of peasant occupants, and by a small body, numerically, of large proprietors. Practically the whole of Sind is now under what is known as the irrigational settlement, which includes the charge for irrigation water under land revenue. The assessment is based on the mode of irrigation adopted. The special feature of the Sind settlement is the allowance for fallows, which are common owing to the poorness of the soil, the abundance of waste land, and the absence of a sufficient supply of manure. Occupants are liable to the full assessment on each survey number when cultivated, but fallow lands are free provided that assessment is paid thereon once in five years. The term of a settlement in Sind is 10 years.

The survey and settlement operations of the period under review call for no special notice.

Good progress was made in respect of the record-of-rights, which was introduced into the Presidency under an Act (the Bombay Land Record-of-rights Act) passed in 1903. Work under the provisions of the Act was immediately started in all districts, and the preparation of the initial record was completed for all Government villages in the Presidency proper and some alienated villages before the end of the decade. The record is being maintained and kept up to date by mutation registers. In most districts the record has produced a marked diminution in litigation, and in petty crime arising out of land disputes.

Baluchistan, Coorg, and Ajmer-Merwara.—Little need be said as to the land-revenue arrangements in the remaining minor provinces. In Baluchistan the tenures are of a very simple character, and individual proprietorship is now almost universal. Under British rule no attempt has yet been made to enforce entire uniformity in revenue management. Revenue is in some cases taken in kind, the usual rate being one-sixth. Settlement work was begun in 1902, and a fixed cash assessment has been introduced in some parts, the usual period of settlement being 10 years. The land revenue realised in 1911–12 was £63,400.

In Coorg a summary settlement on the basis of the recent survey was made in 1896, the rates then fixed being for 10 years. Resettlement operations were taken in hand in 1906, and are expected to be completed by the end of 1913.

In Ajmer the tenures are analagous to those prevailing in the adjacent native states of Rajputana. In Merwara, all cultivators have been recognised by the British Government as proprietors.

Collection of the Land Revenue.

General Financial Results.—The following table gives the total gross receipts from land revenue in each year, after deducting the amount credited to irrigation (now considerably more than £1,000,000 a year):—

Year.	Land Revenue Receipts (excluding those due to Irrigation).	Variation.
	£	
1881–85 (five years' average)	14,748,000	100·0
1886–90 „ „ (annexation of Upper Burma)	15,445,000	104·7
1891–95 „ „	16,522,000	112·0
1896–1900 „ „ (includes two famines)	17,217,000	116·7
1900–01	17,484,000	118·5
1901–02	18,265,000	123·8
1902–03	18,416,000	124·8
1903–04	19,211,000	130·2
1904–05	18,927,000	128·3
1905–06	18,836,000	127·7
1906–07	19,794,000	134·2
1907–08 (widespread shortage of crops)	18,719,000	126·8
1908–09	19,759,000	134·0
1909–10	21,332,000	144·6
1910–11	20,878,000	141·6
1911–12	20,765,000	140·8

(Collection of the Land Revenue.)

The growth of the land revenue is attributable to a variety of causes—to the bringing of new land under cultivation, as in Lower Burma, the Central Provinces, Sind, and the Punjab; to the inclusion of Berar since 1902; and to the effect of settlements and resettlements, which, owing to the generally enhanced value of land, usually result in additions to the land revenue demand. The figures for 1909–10 were swollen by the payment of large arrears outstanding from the two preceding unfavourable years. The exact nature of the receipts and charges included under the head land revenue is indicated by the table below, which gives the figures by provinces for the financial year 1911–12 :—

	India, General.	Bengal.	Eastern Bengal and Assam.	United Provinces.	Punjab.	North-West Frontier Province.	Burma.	Central Provinces and Berar.	Madras.	Bombay.	Total.
REVENUE.	£	£	£	£	£	£	£	£	£	£	£
Ordinary land revenue	95,029	1,919,949	1,302,657	4,358,353	1,855,319	132,663	1,744,062	1,224,588	4,435,188	2,645,260	19,713,069
Sale of proprietary right of Government in land	—	138	190	196	392,389	—	—	—	—	—	392,913
Sale of waste lands and redemption of land revenue	874	2,316	558	267	7,191	40	118	3,076	12,028	—	26,467
Assessment of alienated lands, less quit-rents	—	4,281	579	—	12,008	322	—	—	—	637,652	654,842
Recovery of survey and settlement charges	—	46,207	1,648	—	—	—	—	—	—	—	47,855
Capitation tax, or house tax levied in lieu	119	202	19,531	—	—	—	619,491	—	—	—	639,343
Fisheries and other receipts classed as miscellaneous	14,815	14,898	30,642	47,597	52,479	10,232	427,896	11,527	20,777	10,811	641,673
Total gross revenue	110,838	1,987,991	1,355,805	4,406,413	2,319,386	143,256	2,791,567	1,239,191	4,467,993	3,293,723	22,116,162
Deduct portion due to irrigation	—	—	—	*113,095*	*388,300*	*4,365*	*9,217*	*275*	*699,127*	*137,086*	*1,351,465*
Total credited to land revenue	110,838	1,987,991	1,355,805	4,293,318	1,931,086	138,892	2,782,351	1,238,916	3,768,866	3,156,637	20,764,697
EXPENDITURE.											
District administration	20,562	207,947	145,286	293,011	150,166	26,478	166,675	82,152	337,400	252,791	1,682,466
Survey and settlement	10,290	85,365	112,413	5,488	59,687	— 27	36,895	30,533	89,060	9,498	439,204
Land records	10,929	27,652	17,916	261,417	108,719	11,998	104,294	71,756	164,701	193,053	972,429
Charges directly connected with the collection of land revenue	1,026	29,155	49,812	16,222	1,629	1,795	147,066	76,067	271,370	96,175	690,319
Total charges in India	42,807	350,118	325,427	576,137	320,198	40,244	454,930	260,509	862,531	551,516	3,784,418
Charges in England											2,036
Total charges											£ 3,786,454

It is unnecessary to refer further to the charges debited against land revenue: like the receipts, they show a general upward tendency. The progress of the gross receipts (again excluding the portion due to irrigation) in each province during the decade is shown below :—

	India, General.*	Bengal.	Eastern Bengal and Assam.†	United Provinces.	Punjab.	North-West Frontier Province.	Burma.	Central Provinces and Berar.‡	Madras.	Bombay.
	£	£	£	£	£	£	£	£	£	£
1901–02	92,001	2,720,775	411,152	4,214,872	1,661,433	58,316	2,209,204	579,036	3,386,324	2,932,239
1902–03	82,110	2,743,301	430,537	4,184,126	1,434,999	111,416	2,224,232	994,651	3,570,115	2,640,406
1903–04	97,823	2,733,539	362,868	4,216,196	1,555,479	118,307	2,348,112	1,081,095	3,540,244	3,157,767
1904–05	100 345	2,743,038	422,484	4,209,304	1,612,134	128,613	2,471,011	1,135,722	3,345,696	2,758,736
1905–06	90,484	2,211,516	1,006,035	3,925,010	1,478,933	125,676	2,551,667	1,134,914	3,510,419	2,801,332
1906–07	101,641	1,926,991	1,290,178	4,108,971	1,659,160	145,488	2,570,588	1,138,221	3,625,065	3,227,488
1907–08	99,958	1,947,048	1,344,981	3,427,746	1,497,024	153,485	2,580,680	1,065,737	3,561,869	3,040,794
1908–09	119,585	1,951,563	1,324,178	4,265.692	1,472,593	150,119	2,732,585	1,108,726	3,608,324	3,025,695
1909–10	125,578	2,032,353	1,351,412	4,547,225	1,889,092	150,353	2,795,526	1,251,645	3,694,793	3,494.164
1910–11	113,320	2,024,635	1,347,928	4,388,209	1,754,597	142,182	2,700,093	1,208,742	3,751,760	3,446,055
1911–12	110,838	1,987,991	1,355,805	4,293,318	1,931,086	138,892	2,782,351	1,238,916	3,768,866	3,156,637

* Includes Ajmer-Merwara, Coorg, Bangalore, Baluchistan and Central India Agencies.
† Assam alone down to 1905. ‡ Berar included from 1st October 1902.

The figures quoted in the above tables are taken from the Finance and Revenue Accounts of the Government of India, and are for financial years, ending on the

31st March. The figures quoted in the sections below, dealing with the provinces separately, are taken from the provincial land revenue reports, and are for agricultural years, ending in most cases on the 30th June or the 30th September.

Bengal, Bihar and Orissa, and Assam.—As a result of the permanent settlement, the incidence of the land revenue is much lower in Bengal and Bihar and Orissa than in most of the other provinces, the *zamindars* and their tenants having shared between them the entire benefit of the enormous increase in the value of the produce of land, including that of waste land brought under cultivation, since 1793. For the same reason the total land-revenue demand is not subject to rapid change. The table shows in round figures the current demand in the several classes of estates at the beginning and end of the decade.

	Bengal.		Bihar and Orissa.
	1901–02.	1911–12.	1911–12.
	£	£	£
Permanently settled estates - -	2,155,000	1,441,000	713,000
Temporarily settled estates - -	236,000	98,000	177,000
Estates held direct by Government	282,000	258,000	111,000
Total - - -	2,673,000	1,797,000	1,000,000

In Bengal the total collections in 1911–12 represented over 96 per cent. of the total demand. The number of estates or shares of estates that became liable to sale for default under the sale laws was 10,546, out of which 878 were actually sold. The "certificate procedure" was applied in 43,556 cases, in the majority of which it was necessary to attach property; but actual sale had to be resorted to in a small percentage only of these cases. Nineteen persons were imprisoned during the year for non-payment of Government demands.

In Bihar and Orissa the total collections in 1911–12 were over 97 per cent. of the total demand. Out of 9,526 estates, shares and interests that became liable to sale under the sale laws for the non-payment of Government revenue, 378 were actually sold. The number of certificates filed was 38,779. Payment was made in most cases either on the mere issue of notices or on attachment of property. Debtors were imprisoned in 25 cases.

The total current demand on account of ordinary land-revenue in Assam in 1911–12 was £465,000, as compared with £380,000 in 1901–02. The settled area in the plains districts increased between the same dates from 12,007 to 13,154 square miles. Only about 5½ per cent. of the total revenue of the province is contributed by permanently settled estates. Of the current demand over 95 per cent. was collected during the year. Property had to be attached in 28,593 cases and sold in 770 cases, the total number of revenue-paying estates being over a million. House-tax yielded £17,300 in 1911–12, and receipts from fisheries £17,200.

United Provinces.—The current demand for land revenue on the roll increased from £4,261,000 in 1902–03 to £4,327,000 in 1911–12. In accordance with the established policy of Government, liberal suspensions and remissions of land revenue were made in parts of the province that suffered in different years from crop failures. In 1902 the arrears outstanding at the end of the previous revenue year were remitted, and a special reduction of the demand was made in Bundelkhand. In 1904–05 and 1905–06 remissions amounting to about £250,000 in each year were made in Bundelkhand and elsewhere. In 1907–08, when there was a widespread failure of harvests, the collection of land revenue fell short of the demand by over £1,000,000, the bulk of which was suspended or remitted. The total remissions in 1908 were over £500,000. The report for the year ending in September 1912 showed that the last traces of the famine of 1907–08 had been effaced. Of the total land revenue demand all but £11,900 was collected, and this balance included £11,500 remitted or suspended. There was a corresponding falling-off in the issue of coercive processes; and a large number of tenants by paying up their arrears of rent were able to escape unfavourable orders in ejectment suits. The total number of processes was 176,012, mostly citations to appear and writs of demand. Moveable property was sold in 654 cases, and immoveable property in 17, while persons were arrested in 1,417 cases.

(Collection of the Land Revenue.)

Punjab.—The fixed land revenue demand and the collections of fluctuating land revenue in 1901–02 and 1911–12 are shown in the margin. They illustrate the great extension of fluctuating assessment referred to above; but it should be added that the fluctuating collections in 1901–02 were abnormally low. The fixed revenue has been increased from time to time by additions resulting from resettlements, the increase being masked to some extent by the effect of conversions to fluctuating revenue. Of the current fixed demand 97·2 per cent. was collected in 1911–12, a remarkable result considering the extensive failure of the *kharif*—due to the balance being redressed by a bumper *rabi*. Coercive processes issued against *lambardars* in 3,386 cases, and at their request in 8,176 cases, the figures in both cases showing a considerable and satisfactory decrease as compared with the preceding year. Two *lambardars* were imprisoned. In only 25 cases altogether were sales of moveable property necessitated.

——	1901–02.	1911–12.
	£	£
Fixed	1,374,000	1,425,000
Fluctuating	183,000	589,000

North-West Frontier Province.—The figures in the margin show the total land revenue demand and collections, fixed and fluctuating, at the beginning and end of the decade. The Pathan generally regards the revenue demand as an inconvenient obligation, to be evaded as long as possible, but 99 per cent. of the total demand was collected in 1911–12 without difficulty, the number of coercive processes falling from 1,984 to 1,565. Moveables were sold in 46 cases, but there was no case of sale of immoveable property. There were 22 cases of imprisonment.

——	1902–03.	1911–12.
	£	£
Fixed	107,000	124,000
Fluctuating	7,500	10,300

Central Provinces and Berar.—The total land-revenue demand in the Central Provinces proper in 1902–03, for land revenue on the roll, was £561,000; in Berar the total demand, including cesses, was £513,000. The corresponding figures in 1911–12 were £636,000 and £606,000 respectively. In 1907–08, when the agricultural conditions were very unfavourable, remissions or suspensions were given on a liberal scale. Payments on account of arrears swelled the total in 1909–10. In 1911–12 a sum of £28,000 was added to rental collections in the Central Provinces, mainly as the result of the completion of settlement operations in various districts, and the land revenue payable was correspondingly increased by nearly £15,000. The arrears of revenue of the previous year were nevertheless recovered practically in full, and of the current demand all but an infinitesimal portion, excluding amounts suspended or remitted, was collected without difficulty. The rental enhancements were paid without complaint. Only one defaulter was imprisoned, and moveable property was sold in nine cases, under the Land Revenue Act. In Berar also the whole revenue demand was collected without any difficulty, and with the minimum of pressure. In the few villages where an undoubtedly serious failure of crops suggested suspensions of revenue, it was found that the revenue had been paid up before effect could be given to the orders.

Burma.—In Burma, as is shown by the table on page 180, the receipts under the head Land Revenue include large sums derived from the capitation tax and from fisheries and other miscellaneous sources, including petroleum and ruby mines. The total demand on account of ordinary land revenue increased from £1,322,000 in 1902–03 to £1,740,000 in 1911–12, the increase being attributable partly to extensions of cultivation and partly to revisions of the rates of assessment, which were formerly very low. The remissions of land revenue increased in 1911–12 to £47,000, the figures reflecting the exceptional extent of the damage done by floods in various parts of the province. Moveable property was sold in 279 cases and immoveable property in 1,920 cases, while 56 defaulters were committed to jail. The figures in each case were lower than those for the preceding year.

(Collection of the Land Revenue.)

Madras.—The total land-revenue demand, excluding cesses, in Madras for the two years ending in June 1903 and June 1912 is shown in the margin. The increase under the head of *ryotwari* lands was due partly to expansion of cultivation and partly to increases of assessment. The figures include charges for irrigation, but exclude amounts remitted in each year under the standing rules on account of specially unfavourable conditions. The settled assessment on *ryotwari* holdings increased from £3,072,000 in 1902–03 to £3,378,000 in 1911–12, the total extent of such holdings increasing from 23·1 to 25·0 million acres.

	1902–03.	1911–12.
	£	£
From permanently settled estates	333,000	333,000
Quit rent levied on *inam* villages held on favourable tenure	51,000	50,000
From *ryotwari* lands, including water rate and miscellaneous revenue	3,621,000	4,038,000
Total land revenue and miscellaneous	4,005,000	4,421,000

Of the total current demand under land revenue and cesses in 1911–12, 98·7 per cent. was collected within the year. The total number of coercive processes issued was 1,448,613, including 1,198,222 demand notices. The number of defaulters whose property was sold was 3,491.

There has been a great reduction in the number of processes issued for the realisation of the revenue, which in 1902–03 exceeded 6,800,000, as the result of orders issued in May 1904 restricting the issue of such notices to cases where there is good reason to believe that the defaulter will not pay without being subjected to actual coercion. The large numbers of demand notices issued can hardly be regarded as coercive processes, except in a technical sense, being little more than a delivery of account and request to pay.

Bombay.—The gross assessed land revenue of Bombay Presidency proper in 1902–03 was £2,616,000, the actual amount for collection during the year, after making deductions for unoccupied land and alienations, and for remissions amounting to £45,000, being £2,005,000. In Sind the "gross revenue" was £2,256,000 and the amount for collection £495,000, large deductions being made on account of unoccupied and fallow lands, and a deduction of £45,000 for remissions. In Sind the area cultivated, and the land revenue receipts, fluctuate greatly according to the character of the inundation, on which cultivation depends. In the year ending in July 1911 the "gross revenue" was £2,655,000 for the Presidency proper, and £2,434,000 for Sind, the amounts for collection on account of current demand being £2,085,000 and £720,000 respectively. In 1911–12 the unfavourable season led to large suspensions of land revenue in all three divisions of the Presidency proper, and to a reduction in the demand in Sind owing to the contraction of the area inundated. The aggregate actual demand was thus only £2,227,000, as compared with £3,116,000 in 1910–11. The only serious difficulty in collecting the revenue demanded was in Ahmedabad, where, though famine was not declared, there was severe scarcity, and collections amounted to only 53 per cent. of the total demand. Elsewhere, arrears were not heavy.

An important improvement was effected in the land revenue system of the Presidency by the introduction in 1906–07 of a regular system of suspensions and remissions when the crops fall below a certain standard or the water-supply on irrigated lands fails.

Tenant-Right and Land Legislation.

Bengal, Bihar and Orissa, and Assam.—Throughout the greater part of Bengal (including Bihar and Orissa) the relations of landlord and tenant are governed by the Bengal Tenancy Act of 1885, which secured the status and privileges of all classes of tenants. The Act provides that every ryot who has held any land in a village for 12 years acquires thereby a right of occupancy, and 80 or 90 per cent. of ryots have such rights. A small number of ryots hold at fixed rates of rent, and the remainder are without a right of occupancy. Even the latter, however, cannot be ejected except in execution of the decree of a competent court, nor can their rents be enhanced at shorter intervals than five years. The Act was amended by Bengal Act I. of 1907, with the object of giving greater facilities to landlords for the collection of rent and at the same time of guarding against enhancement of rent by collusive compromises,

and removing the ambiguities, anomalies, and defects brought to light by twenty years' experience of the working of the Act. The Act is reported to have worked smoothly on the whole in Bengal during 1911–12. Its main provisions are now fairly well known both to landlords and to tenants; but there are indications that the importance of various sections has not yet been realised by the public. The levy of *abwabs* or illegal cesses in addition to rent continues to prevail more or less throughout the Presidency. It is reported that, as a rule, the tenants pay these illegal demands without much demur in order to escape harassment in other ways.

For the Chota Nagpur Division, the law as to landlord and tenant was consolidated and amended by the Chota Nagpur Tenancy Act of 1908, the object of which was to secure the ryots in the enjoyment of their existing rights, and to ensure in cases of necessity their protection against oppressive landlords, while at the same time safeguarding the interests of the landlords in many important matters It was reported in 1911 that as a result of the application of this Act to the evidence afforded by the record-of-rights, the burdens of litigation and of general administration had decreased enormously, and that there was now abroad a feeling of security in the enjoyment of agrarian rights. The Act is as yet imperfectly understood by the aborigines of the division, and is being cautiously administered, with good results.

The Government of Bengal came to the conclusion, towards the end of the decade, that it was desirable to undertake special legislation also for three of the districts of the Orissa Division. There was evidence to show that the sections of the Bengal Tenancy Act applied to those districts had proved in practice to be ill-adapted to local conditions. The revisional settlement had brought to light the fact that claims by landlords to a record in their own names of lands, alleged to be in their cultivating possession, were frequent, and that disputes on this subject between them and their tenants were acute. It was found also that agreements were often exacted from tenants the effect of which was to prevent the accrual of occupancy rights, and that a large majority of landlords were opposing the reclamation of waste lands by cultivators, and, where such reclamations had been made, were endeavouring to deprive the cultivators of the fruits of their labour. The Orissa Tenancy Bill, introduced in the Bengal Legislative Council in July 1911, was intended to remedy these and other defects, and to provide a new self-contained agrarian code for the districts in question; it made provision also for the maintenance of land records. The Bill was finally passed by the Bengal Legislative Council on the 27th March 1912, four days before the new province of Bihar and Orissa was constituted. In view of this last fact, and of the contentious nature of the Bill, the Governor-General withheld his assent, so as to leave the Government and the Legislative Council of the new province free to deal with the various questions raised.

The Bengal Tenancy Act is in force in all the Eastern Bengal districts, except the Chittagong Hill Tracts. It was amended in 1908, as regards Eastern Bengal, by an Act following the same lines as the Bengal Act of 1907.

In Assam the only special law as to landlord and tenant is the Landlord and Tenant Procedure Act of 1869, which is in force in Goalpara and Sylhet.

United Provinces.—Questions of tenancy-right and rent-rates are of great importance in the United Provinces, as in Bengal. The bulk of the land is held by cash-paying tenants, and except in the permanently-settled area the revenue is assessed on the basis of the rents in force at the time of settlement. In the permanently-settled districts a special class of tenants is found who have heritable and transferable rights at a fixed rent, and are liable to eviction only for default in paying rent. Other tenants are divided into two classes according as they have or have not a right of occupancy; but the term "occupancy tenant" bears different meanings in Agra and Oudh.

In Agra the occupancy tenant has a heritable right to hold certain land, and is not liable to eviction except for default in paying rent, while the rent payable cannot be enhanced except by mutual agreement or by order of a revenue court, generally on the ground that it is below the prevailing standard of rent for similar land. Since 1859 any tenant has acquired occupancy rights in land cultivated from year to year without a lease for at least 12 years, and an Act of 1901 (the Agra Tenancy Act), referred to in the last decennial number of this Statement, provides that the change of a holding or dispossession for less than a year shall not operate as a break in the period of 12 years, while a lease does not prevent the accrual of occupancy rights unless it is for at least seven years, the object being to induce landlords, if they do not

choose that their tenants shall acquire any rights, at least to grant them long-term leases. The Act also made the ejectment of ordinary tenants more difficult. The number of ejectments has nevertheless risen in recent years; but, on the other hand, the area protected from arbitrary ejectment by long leases or occupancy rights has grown considerably and amounted in 1911 to 68 per cent. of the total area held by ordinary tenants as compared with 64 per cent. in 1903.

A landholder who parts with his proprietary rights obtains occupancy rights in his home farm at a privileged rate of rent, 25 per cent. below the rate generally payable by non-occupancy tenants. This is called "ex-proprietary right."

In Oudh the so-called "occupancy tenant" corresponds to the "ex-proprietary tenant" in Agra, and no tenant acquires occupancy rights by prescription; the rent of the occupancy tenant cannot be enhanced beyond a rate 12½ per cent. lower than that ordinarily paid by cultivators with no such right.

Other tenants in Agra are merely tenants-at-will, but the Act provides that, where the rent of a non-occupancy tenant is enhanced, he shall be entitled, as a general rule, to hold the land at the enhanced rent for a term of not less than five years. In Oudh any person admitted to the cultivation of land acquires certain rights; he is entitled to hold it for seven years at the same rent, and enhancement at the end of that period is limited to 6¼ per cent.

The amount of rent litigation in Agra rose considerably in 1911–12, the total number of suits and applications of all kinds under the Act being 385,014, an increase of 48,158 on the previous year's figures. In Oudh the total rose only very slightly, to 94,285.

Laws passed in recent years have placed important restrictions on the transfer of land. The Oudh Settled Estates Act of 1900 provided a system of entail, which can, however, be applied only in the case of *talukdars* and grantees whose estates are subject to the rule of primogeniture. In 1903 special legislation was undertaken for Bundelkhand, in view of the serious indebtedness of the landholders of this tract, in which great liability to agricultural calamity is coupled with markedly improvident habits on the part of the people. The first Act (the Bundelkhand Incumbered Estates Act, 1903) revived and extended, with modifications, legislation applied to Jhansi in 1882, which provided for inquiry into debts by a special judge, and for liquidation of the amounts found to be justly due with the aid of loans from Government. At the same time, and as a necessary complement, restrictions were placed upon the right of transfer by a second measure (the Bundelkhand Alienation of Land Act, 1903) modelled on the Punjab Act of 1901. Under this Act permanent alienations of land cannot be made, without the special sanction of the Collector, where the alienor is a member of one of certain agricultural tribes, except in favour of another member of the same tribe, or when both parties reside in the same district and are both members of agricultural tribes. Except when permanent alienation is allowed, mortgages and leases are subject to the condition that possession of the land involved cannot be transferred for more than 20 years. Sales in execution of decrees passed by civil or revenue courts (other than those of the Special Judges appointed) are forbidden, but such decrees may be liquidated by usufructuary mortgages for terms not exceeding 20 years. The Act is reported to be working satisfactorily. The price of land is gradually rising, and there is no general dissatisfaction with the Act on the ground of depreciation of land value. It is reported from some parts that the agricultural classes are learning to exercise economy in marriage and other expenses, because they cannot get loans as easily as before, and that their financial condition has much improved in consequence.

Punjab.—As nearly one-half of the land in the Punjab is cultivated by the owners themselves, and a fair proportion of the rest by owners who pay rent to co-sharers or other owners, the tenant class is neither so large nor so distinctively marked as in the rest of Northern India, and the law affords much less elaborate protection to the tenant than is usual in the United Provinces or in Bengal. A limited number of the tenant class, amounting to nearly one-fifth of the whole, have been marked off by the legislature on certain historical grounds as entitled to rights of occupancy, and the rents of this class cannot be enhanced beyond a standard fixed in each case with reference to the land revenue. In the case of the remaining tenants, who hold at will, no limit is fixed to the discretion of the landlord in the matter of enhancement; but the procedure to be followed in ejectment, and the grant of compensation for improvements legally executed, are provided for by law in respect of both classes of tenants.

(Tenant-Right and Land Legislation.)

The question of the alienation of land, on the other hand, has in the Punjab taken a prominent place. In view of the serious extent to which land was passing from the hands of the old agricultural tribes to those of the moneyed classes, the Government was compelled in 1901 to place restrictions on the alienation of land in the province. The Act passed (the Punjab Alienation of Land Act, 1900) was the first general measure of its kind introduced in India, and one of the greatest importance. Some account of its provisions was given in the last decennial number of this Statement. Experience of the working of the Act has shown that it has been a great success, and that, though there has been some contraction of credit and a welcome reduction in extravagant expenditure, the *zamindar* has not been hampered in his business or in his daily life by any difficulty in getting ready money when he requires it. Some amendments in matters of detail were made by an Act passed in 1907. It is reported that the most interesting phenomenon at present is the endeavour of those who are not members of agricultural tribes notified under the Act, and see no prospect of notification, to alter their tribal designation to that of a scheduled tribe. Attempts to evade the Act, with the aid of dummy transferees, or by other means, come to notice and require careful watching. Between 1901–02 and 1911–12 there was a steady rise in the average sale price of land from less than £5 to over £8 per cultivated acre.

One of the corollaries to the passing of the Alienation of Land Act was the recasting of the law of pre-emption. The new law came into force as the Punjab Pre-emption Act of 1905, its chief aim being to prevent a non-agriculturist when he has once gained a footing in a village community from buying up other shares in the village as they come into the market and so expropriating the true agriculturist and breaking up the village community. The pre-emption law is admittedly unsatisfactory, and gives rise to abuses, and there is a considerable body of opinion in favour of sweeping away the whole system as an archaic survival.

North-West Frontier Province.—In the North-West Frontier Province, as in the Punjab a large proportion of the land is cultivated by the owners themselves, and the position of the tenant class is much the same in the two provinces. Most of the tenants-at-will pay their rent in kind in the form of a share of the produce; the original rents were reasonable, and respect for hereditary customs has prevented any tendency towards rack-renting. With the growth of peace on the frontier there has, however, arisen an enhancement of the value of land, with the consequent temptation to realise in cash. One section of the Punjab Alienation of Land Act—that prohibiting mortgages containing a foreclosure clause—was in force in the province at the beginning of the decade. Shortly afterwards, in view of the growing tendency of the land to pass into the possession of the money-lending classes, it was decided to apply the Act, with certain modifications, to the Hazara, Bannu, and Dera Ismail Khan districts, and effect was given to this decision in 1904. In the Peshawar and Kohat districts, where transfers to outsiders were comparatively rare, and the people, accustomed to the freedom of transfer common among an Afghan population, were averse to any restrictions, things were left as they were. It was reported that the Act was undoubtedly regarded by the agricultural tribes as a useful and beneficial measure. There was some contraction of credit, and some complaints were made by money-lenders, but the *zamindars*, while forced to curtail somewhat their extravagant expenditure on social occasions, are reported to have recognised fully the advantages conferred on them by the Act.

Central Provinces and Berar.—The position of tenants in the Central Provinces is, as has already been observed, exceptionally strong. The Tenancy Act of 1898, an account of which was given in the last decennial number of this Statement, remained in force without substantial modification during the decade. The most privileged class of tenants (holding 10·5 per cent. of the total area of village land in the *khalsa*) are those whose tenure is defined as "absolute occupancy"; this is heritable and transferable, subject to pre-emption on the part of the landlord, and includes fixity of rent for the term of settlement. In the next class are "occupancy tenants (27·9 per cent. of total area)," whose rents are fixed at settlement, and are liable to enhancement by a revenue officer at intervals of not less than 10 years. Their tenures are heritable by direct succession, but cannot since 1898 be transferred, except to an heir or a co-sharer, or by a sub-lease for one year, this restriction having been imposed with a view to protecting this class of tenants from expropriation for debt. The status of an "absolute occupancy" tenant cannot be acquired:

"occupancy" rights, acquired up to 1884 by 12 years' continuous possession, are now obtained only by the payment of a premium of 2½ years' rental. Ordinary or non-occupancy tenants (37·5 per cent. of area) until recently held almost at the pleasure of their landlords, and were in some tracts severely rack-rented; but the Act of 1898 conferred on them a very substantial measure of protection. Their rents, like those of the superior classes, are now fixed at settlement, and the settlement officer has power to reduce exorbitant rents. The rent can be enhanced at intervals of seven years after settlement, but the tenant can apply to a revenue officer to have a fair rent fixed. As in the case of occupancy tenants, and for the same reasons, the right of transfer has been withdrawn.

In Berar, under the prevailing *ryotwari* tenure, an occupant may retain his occupancy right for ever, subject to the payment of the assessment and dues, which are liable to revision every 30 years. He may sublet his holding, but only by private arrangement, which finds no place in the revenue records. The land may be relinquished, with due notice, or the occupancy right may be transferred by sale or otherwise.

Burma.—In both Lower and Upper Burma the small peasant proprietor dealing direct with the State is the leading figure in the revenue system, and the relations between landlords and tenants have thus never assumed the prominence that they hold in *zamindari* provinces. There has, however, in the last twenty or thirty years been a rapid increase in the number of tenants holding under the persons with whom the revenue is settled. In 1911–12 the area of land let at full rents to tenants was 4,579 square miles, and the number of tenants 180,909. The number of permanent tenants is however very small. Most of the tenants belong to the fluctuating class, tenants one year and labourers the next. Tenancies in which rent is a share of the produce (the prevailing form of tenancy in Upper Burma) are excluded from the returns. There have been some reports of oppression by landlords and rack-renting, and proposals for legislation to protect tenants and to restrict the alienation of land have been discussed. A Tenancy Bill was introduced in the Burma Legislative Council in 1908, but it was decided after further consideration to devote attention for the present to other methods of improving the condition of tenants.

In Lower Burma a permanent, heritable, and transferable right of use and occupancy in land is acquired either by continuous occupation for 12 years, combined with regular payment of land revenue, or by a specific grant by the State, and practically the whole of the occupied land is held under one or other of these tenures.

Madras.—In the *ryotwari* areas in Madras the registered occupant of each field is entitled to hold the land for ever (subject to the possibility of purchase for a public purpose) so long as he pays his land revenue, and inheritance, transfer, mortgage, sale, and lease are without restriction. Registered ryots in many cases sub-let their lands. The distribution of the land among the several classes, the character of the people, and the comparative absence of professional money-lenders of an alien class, have rendered unnecessary any legislation or measures directed against the acquisition of land by non-agricultural classes.

The status and rights of the cultivators in *zamindari* estates were not in the past everywhere clear, though in most cases they were fixed upon the land precisely like *ryotwari* cultivators. The *zamindars*, however, usually have home-farm land, in which they possess complete rights, and can demand any rents they can obtain. The position of tenants in the *zamindari* areas is now defined and regulated by the Madras Estates Land Act of 1908. This important measure repealed and re-enacted the processual enactment, the Madras Rent Recovery Act, 1865, and at the same time remedied the imperfections of the old Act and declared in clear terms the substantive and relative rights of landholders and ryots. In respect of the most important of the ryot's rights, that of occupancy, the Act proceeds upon the principle that every cultivator admitted by the landholder to the cultivation of the estate lands (not being private domain or land of the description classed as "old waste") has the status of an occupancy ryot protected against eviction so long as he pays the established or prescribed rates of rent. This was the position enjoyed by the cultivator under ancient custom. The occupancy tenure is heritable and transferable. Enhancement of rent is permitted only within certain limits and on certain clearly defined grounds, and then only by suit before the Collector. A non-occupancy ryot may acquire occupancy rights by the payment of a sum equal to 2½ years' rent.

Non-occupancy ryots also are protected in respect of enhancement of rents and ejectment. The Act further makes provision for the maintenance by the landholder of irrigation works, the survey of estates, the preparation of a record-of-rights, and the settlement of rents, and for the ousting of the original jurisdiction of civil courts in disputes between landholders and ryots. The immediate effect of the Act in some districts was disturbing, and it led to considerable litigation, but it is reported that difficulties are gradually settling down as suits are decided and as the provisions of the Act are better understood.

Mention may also be made of the Madras Land Encroachment Act of 1905, which provided for the prevention of the unauthorised occupation of public lands, and for the levy of charges in respect of such occupation.

Bombay.—In Bombay, as in Madras, a ryot is secured in possession of his holding so long as he regularly pays the instalments of his land revenue, and the right of occupancy, in the case of the ordinary survey tenure, is transferable by inheritance, sale, gift, or mortgage without restriction. In Sind few tenant-rights are in existence. The smaller *zamindars* cultivate for themselves, and the larger through yearly tenants, who almost always pay rent in kind. Two important enactments have a special bearing on the land revenue policy of the Bombay Government. In 1879 the Dekkhan Agriculturists' Relief Act was passed to cope with agrarian discontent in four Deccan districts—Poona, Satara, Sholapur, and Ahmadnagar. The Act provided for the appointment of a special judge and numerous conciliators, who were empowered to investigate mortgages and similar alienations of land, to revise the terms of the contract, and to arrange for an equitable settlement of claims, with a view to restoring the original rights of the occupant. The greater part of the Act was extended to the remainder of the Presidency, except Aden and the City of Bombay, in 1905. Reports indicate that the Act has had the desired effect of protecting the revenue-paying classes from the encroachment of non-agriculturists; and that, although it has restricted credit, it has not done so to the extent of hampering agricultural operations. The Bombay Land Revenue Code Amendment Act of 1901 created a special tenure known as the restricted or non-transferable tenure. Under this Act the Collector is authorised to grant the occupancy of lands for limited periods or on such conditions as he may think necessary, the principal of these being that the occupant cannot alienate his land without the previous permission of the Collector. The total area held under the restricted tenure on the 31st July 1911 was 2,191 square miles. The conditions of the non-alienable tenure are designed to meet the circumstances of the wild tribes, the depressed castes, and other classes of cultivators who are known to be backward or improvident.

Wards' and other Estates.

Wards' Estates.—Courts of Wards have now been established in all the larger provinces except Burma. Originally intended for the protection of the Government revenue, they are also beneficial to the interests of the owners, and recent changes in the law have been made largely in the owners' interests. The duty of the Courts is to manage the estates under their charge in the interests of both proprietors and tenants; to support the family of the proprietor, and to educate young wards; to pay off debts due by the estates; and to spend the surplus income on the improvement of the property in the best attainable way. In Bombay and the Central Provinces, Commissioners are Courts of Wards for their divisions; elsewhere the Board of Revenue or Financial Commissioner occupies that position for the whole province, but necessarily acts very largely through the agency of Commissioners and Collectors. Before 1899, the Courts had power to assume the management of estates of minors, of persons physically or mentally incompetent to manage their own property, or of persons declared by the local Government, at their own request, to be disqualified for its management. New Acts passed in that year and since in several provinces have conferred on Government further powers of putting estates under the control of the Courts, without consent of the owners, when the latter are in a special degree unqualified for their proper management, the general effect of the Acts otherwise being to increase the powers of the Courts of Wards with regard to the management of the properties under their charge and the discharge of encumbrances, and to prevent disqualified proprietors from creating new charges without the knowledge of the Courts.

(Wards' and other Estates.)

The Madras Act of 1902, passed early in that year, was referred to in the last decennial number of this Statement. During the period under review, new Acts were passed for the Punjab and the United Provinces, in 1903 and 1912 respectively, and provision for the constitution of Courts of Wards in Bombay was made for the first time by the Bombay Court of Wards Act, 1905. The Punjab Act took the place of the provisions of an Act of 1872, which experience had shown to be inadequate and defective. Under the old Act, framed when the tradition of a very independent district administration was still fresh, the Deputy Commissioner of each district was his own Court of Wards. By the new Act the Financial Commissioner was made Court of Wards for the whole province. Another important provision empowered the local Government, in the case of a landholder belonging to a family of political or social importance, to declare him unfit to manage his property, not only "owing to "his having been convicted of a non-bailable offence and to his vicious habits or "bad character" (as under the United Provinces and Central Provinces Acts of 1899), but also "owing to his having entered upon a course of wasteful extravagance likely "to dissipate his property." A section providing on similar lines for the case of spendthrift proprietors was the chief new feature introduced by the United Provinces Act of 1912. In the case of the Bombay Act, the assumption of management by Courts of Wards without application is restricted to estates of minors and persons declared by Civil Courts to be incapable of managing, or unfit to manage, their affairs; but a Court may base such a declaration on the existence of habits likely to cause injury to the property or to the well-being of inferior holders, as well as on physical or mental defect or infirmity.

The table in the margin shows the number of estates under management in the different provinces during the last year for which information is available in each case.

—	Number of Estates under Management during Year.	Total Receipts of Estates.
		£
Bengal*	216	1,149,000
Eastern Bengal and Assam*	56	278,000
United Provinces*	204	1,356,000
Punjab	53	161,000
North-West Frontier Province	9	14,000
Central Provinces*	77	19,000
Madras	18	279,000
Bombay	66	41,000
Sind	108	19,000

* Figures for 1910–11. Other figures are for 1911–12.

The reports on the working of the Courts of Wards call for little comment. There is said to have been a remarkable development of public opinion in the United Provinces in support of the provisions of the new Act enabling action to be taken more freely to disqualify proprietors who are dissipating their estates. In other directions also the confidence of the people in the character of the work done is apparent. In the Punjab also the usefulness of the Court in saving from reckless dissipation or improper diversion the property and funds of families of note is reported to have been abundantly proved.

Other Estates.—Little need be said as to other estates under the management of Government officers. In Bengal there were in 1910–11, including estates belonging to private proprietors but managed by Government, 938 estates under direct management, with a current land revenue demand of £192,000. In Eastern Bengal, 1,601 estates, with a revenue demand of £168,000, were held direct by Government. The total for Bengal given in the table above, it may be mentioned, includes, besides Wards' estates, 121 encumbered estates in Chota Nagpur, where a special Act, designed to protect large ancestral estates from being sold up to meet the debts of their proprietors, is in force. In the United Provinces there were 610 Government estates, with a current demand of £23,000. In Bombay, estates are managed under several special Acts, of which the Gujarat Talukdars Act and the Sind Incumbered Estates Act are the most important. There were, in the last year of the decade, 622 estates altogether, with a gross demand of £85,000, under the management of the Talukdari Settlement Officer, and 278 estates, with receipts amounting to £41,000, under the Manager of Incumbered Estates in Sind. The number in the latter case showed a small increase for the first time since 1902–03, this result being due to the unfavourable season. The number under management in 1901–02 was 524; the best estates were discharged first, and the department is now left with a sediment of bad estates, the discharge of which must of necessity be very slow.

(Opium.)

CHAPTER XII.

REVENUE FROM OPIUM AND TAXATION.

Opium.

Opium contributes to the revenues of India under two heads. The net revenue credited in the public accounts under the head "Opium" is that derived from the export of opium to other countries. There is also a very considerable, though hitherto much smaller, revenue derived from opium consumed in India, which is credited under the head "Excise." In its financial aspect, and as regards some provincial details, the latter revenue is dealt with in the Excise section of this chapter; but it will be convenient to deal generally with the whole subject of opium in the present section.

The principal areas in which the poppy is (or was until recently) grown in India are, firstly, Bihar and the districts of the United Provinces lying along and in the north of the Ganges valley, and, secondly, a number of Native States in the Central India and Rajputana Agencies, principally Indore, Gwalior, Bhopal and Mewar. There is also some production in Baroda. The produce of the first region is known as Bengal, and that of the second as Malwa, opium. Cultivation in Bihar was brought to an end in 1911. Small quantities of opium are produced also in certain restricted areas in the Punjab and Ajmer-Merwara, in the Shan States beyond British limits, and in some Kachin villages in Upper Burma.

Bengal Opium.—The manufacture of Bengal opium is a State monopoly, and cultivation and manufacture are under the superintendence of a special department. The department was formerly divided into two agencies, one for Bihar with headquarters at Patna, and one for the United Provinces with headquarters at Ghazipur, near Benares, both being controlled by the Bengal Government. In 1910 the agencies were amalgamated, the single Agent being stationed at Ghazipur, and the control was transferred to the United Provinces Government. The poppy may be grown only under licence from an authorised officer of the department; and the cultivator, who receives advances, when required, to assist him in production, is bound to sell the whole of his out-turn at a fixed rate to Government. He delivers it in the form of crude opium at local centres, whence it is despatched to the head factories (formerly two, at Patna and Ghazipur; since 1911 there has been one only, at Ghazipur) and there prepared for the market. The opium for export, known as "provision" opium, is packed in chests and sold by public auction in Calcutta. "Excise" opium is distributed from the factory, or from the Calcutta warehouse, to the Government treasuries, whence it is issued, on payment, to licensed vendors and druggists only. Out of the sale proceeds a sum representing the estimated cost of production is credited to the opium revenue; the remainder is credited under Excise. The crop being particularly sensitive to seasonal influences, and the out-turn very variable, a reserve stock is maintained.

Malwa Opium.—The Malwa opium revenue is derived from a pass-duty levied on opium exported from the Native States, and, since the beginning of 1912, partly also from sums paid for the right to export such opium from India. The Government of India does not interfere with production or consumption within the States, but no opium may pass into British territory for export or consumption without payment of duty, and the amount to be exported in each year is fixed by the British Government. The main opium-producing tracts, it may be mentioned, have no access to the seaboard except through British territory. The duty is levied at convenient stations maintained by the British Government at Indore and elsewhere, whence the bulk of the opium is consigned to a central depôt at Bombay for issue to traders. The duty on Malwa opium intended for export was raised from Rs. 600 to Rs. 1,200 (*i.e.*, from £40 to £80) a chest at the beginning of 1912; and at the same time a system of putting up to auction the right of export was introduced. A considerable increase in the revenue from this class of opium resulted. A proportion of the receipts, it should be added, is, under the new arrangements, made over to the Native States concerned.

Arrangements with China.—The outstanding feature of the period under review was the conclusion of agreements with the Chinese Government for the gradual diminution, and ultimate extinction, of the export of Indian opium to China. The first arrangements, made in 1907, were based on an average shipment of opium from India to the amount of 67,000 chests a year, of which 51,000 were for China. It was agreed that the

total quantity of opium sold or passed for export from India should be limited to 61,900 chests in 1908, and reduced by 5,100 chests (one-tenth of the average export to China) in each of the two succeeding years. Under an agreement signed in May 1911 the same rate of reduction was continued, and the reduction was brought to bear directly on the export to China by arranging that each chest of opium sold for export to China should be provided with a certificate, and that opium not so certificated should be excluded from the country. Provision was also made for an earlier cessation of the export to China in the event of the native Chinese production of opium being suppressed before the expiration of the period of ten years.

The above measures were taken at the instance of the Chinese Government, and were welcomed by them as meeting their wishes.

After the end of the period covered by this Statement, the stringent anti-opium measures adopted by the Chinese authorities, and the consequent accumulation of stocks at Shanghai and elsewhere, led to the suspension of the sale of opium destined for China. The Government of India in January 1913 gave notice that the sale of "certificated" opium would be suspended in April, and fixed an enhanced upset price for sales before that date, which in effect operated as an immediate suspension of sales. The amount of opium to be sold in 1913 for consumption in countries other than China was at the same time reduced. It has since been decided that the trade to China shall not be resumed.

Production of Bengal Opium.—The area under opium cultivation in the Bihar and Benares Agencies, and the output of manufactured opium, were greatly reduced in the latter years of the decade, in correspondence with the reduction in the export. In the first few years the figures, as the marginal table shows, were at a high level, the area under cultivation in 1903–04 being actually the largest on record. Cultivation was carried on in Bihar for the last time in 1910–11, its cessation involving the extinction of an industry which existed before the British occupation. In both 1910–11 and 1911–12 the seasons were unfavourable and the outturn poor. Many ryots are reported to be relegating the poppy to inferior lands, and some are leaving the industry in view of the general uncertainty attaching to it. The Patna Factory was closed, as already mentioned, at the end of 1911, and manufacturing operations are now concentrated at Ghazipur.

Factory Years (ending in October).	Area of Cultivation (deducting failures).	Number of Chests* of Opium made.	
		Excise.	Provision.
	Acres.		
1901–02 -	591,837	6,079	44,723
1902–03 -	582,807	5,091	64,739
1903–04 -	642,831	4,778	50,000
1904–05 -	587,128	5,973	55,500
1905–06 -	613,996	5,635	48,750
1906–07 -	564,585	6,263	38,126
1907–08 -	488,548	11,229	40,001
1908–09 -	361,832	5,770	28,125
1909–10 -	354,577	7,172	29,000
1910–11 -	362,868	8,611	15,000
1911–12 -	200,671	†	14,000

* A chest of provision opium contains about 140 lbs., a chest of excise opium about 123 lbs.

† Figures not available.

Exports.—The total exports of Bengal and Malwa opium, with the amounts exported to the countries taking the largest quantities, are shown in the following table :—

	Exported from India (Chests).						
	From Calcutta (Bengal Opium).				From Bombay (Malwa Opium).		Total Exports.
	To China (including Hong Kong).	To Straits Settlements.	To Cochin China.	Total to all Countries.	To China (including Hong Kong).	To Straits Settlements.	
1901 - - -	29,333	15,446	1,350	47,950	17,198	—	65,178
1902 - - -	29,278	15,222	1,450	47,506	20,392	—	67,917
1903 - - -	29,860	14,342	2,250	48,430	23,937	35	72,425
1904 - - -	32,828	11,993	1,100	47,842	20,537	55	68,452
1905 - - -	32,769	12,894	500	47,976	15,055	—	63,054
1906 - - -	37,753	12,345	300	52,595	13,000	—	65,617
1907 - - -	32,945	13,558	1,920	49,043	14,354	—	63,415
1908 - - -	32,867	11,459	800	47,072	15,264	60	62,407
1909 - - -	28,825	10,815	2,450	43,800	13,423	—	57,240
1910 - - -	22,570	10,688	1,110	36,620	11,670	—	48,302
1911 - - -	17,325	7,309	2,375	30,307	14,506.	—	44,819

(Opium.)

A large proportion of the opium imported into Singapore is subsequently exported to neighbouring countries. Hitherto China has been practically the only market, outside India, for Malwa opium.

Revenue and Expenditure.—As has already been noticed, the diminution of the output of opium was accompanied, up to the end of the period under review, by a large increase, instead of by a corresponding decrease, in the revenue accruing to Government. The marginal table shows the net receipts from each class of opium in each year (excluding the amounts credited to excise) as given in the accounts of the Government of India. The increase in net revenue was due partly to the rise in price of opium, and partly to the reduction of the charges in respect of the cultivation and manufacture of Bengal opium, which in 1911–12 were only £726,500, as against £2,220,000 in 1903–04, when they reached a maximum.

—	Bengal.	Malwa.	Total.
	£	£	£
1901–02 -	2,700,810	542,522	3,243,332
1902–03 -	2,188,772	661,183	2,849,955
1903–04 -	2,638,361	871,940	3,510,301
1904–05 -	3,305,506	748,908	4,054,414
1905–06 -	3,008,457	567,882	3,576,339
1906–07 -	3,196,818	550,418	3,747,236
1907–08 -	2,955,809	619,736	3,575,545
1908–09 -	3,249,083	1,399,617	4,648,700
1909–10 -	3,699,985	724,543	4,424,528
1910–11 -	6,265,480	9,825	6,275,305
1911–12 -	4,536,555	695,272	5,231,826

Note.—The small deductions in respect of assignments and compensations, and refunds, for which allowance is made in the figures on page 152, are here left out of account.

The price paid at the monthly auctions for Bengal opium, which has always been subject to considerable fluctuations, rose to unprecedented heights in the closing years of the decade. From 1901 to 1909 it was, generally speaking, about Rs. 1,300 or 1,400 a chest, the extremes being Rs. 1,074 in May 1902 and Rs. 1,765 in February 1904. In November 1909 the average rose to Rs. 1,800, and from that time onwards the tendency was strongly upwards, though still with marked fluctuations. After the beginning of 1911, when the distinction between "certificated" and "uncertificated" opium was introduced, the former was sold at much the higher price. Speculation reached its zenith in October 1911, when opium certificated for exportation to China fetched the phenomenal price of Rs. 6,015 a chest. Prices remained high in 1912.

The receipts and charges in 1911–12 are shown in detail below:—

	£
Receipts:	
Bengal opium—	
Proceeds of 26,330 chests sold by auction in Calcutta for export, being at the average rate of Rs. 2,790.7.0 per chest - -	4,898,152
Proceeds of 530 chests supplied to the Formosa Government and the Government of the Straits Settlements at Rs. 2,627.4.3 per chest -	92,830
Value of opium sold by the Excise Department for consumption in India under Revenue Regulations at the rate of Rs. 8½ per seer -	267,155
Miscellaneous receipts - - - - - - -	4,967
Total, Bengal opium - - - - -	5,263,104
Bombay opium—	
Duty realised on 10,607 chests of Malwa and other opium, at the average rate of Rs. 980.6.5 per chest - - - -	693,274
Compensation and miscellaneous receipts - - - -	4,901
Total, Bombay opium - - - - -	698,175
Total receipts - - - - - -	5,961,278
Charges:	
Superintendence, factories, and district staff - - - -	100,784
Payments to cultivators - - - - - - -	622,284
Other charges - - - - - - -	6,384
Total charges - - - - - -	729,452
Net receipts - - - - - - -	5,231,826

(Opium.)

Consumption in India.—Opium is consumed in all provinces in India. It is largely used for medicinal purposes, and is a common household drug of the people. It is commonly taken in the form of pills; but in some places, chiefly on social and ceremonial occasions, is drunk dissolved in water. Opium smoking is not extensively practised in India proper, where it is considered disreputable; the practice of opium eating, as it exists in India, has little or no connection with what is generally known as the "opium habit." The Royal Commission, reporting in 1895, found that the opium habit as a vice scarcely existed in India, that the extensive use of the drug for non-medical and quasi-medical purposes was accompanied in some cases by benefit and for the most part by no injurious consequences, and that non-medical uses were so interwoven with medical uses that it would not be practicable to draw a distinction between them for the purposes of distribution and sale. There is no reason to doubt that these conclusions still hold good. Centuries of inherited experience appear to have taught the people of India discretion in the use of the drug, and its misuse is a negligible feature in Indian life.

Dealings in opium are regulated by rules framed under the Indian Opium Act of 1878. The details vary in different provinces. The excise revenue derived from opium is mainly composed of duty and vend fees, the rate of duty varying with the conditions of the locality and being highest where smuggling is most difficult. Generally speaking, the drug is issued to licensed vendors and druggists at a fixed price from Government treasuries or depôts, and the right of retail vend is sold by annual auction, for one or several sanctioned shops. Bengal opium was supplied for internal consumption in most provinces throughout the decade, but Malwa opium was supplied in Madras up to 1908, and in Bombay up to the end of the period. In most provinces the issue price of opium has been raised in recent years, and the legal limit to the amount of opium that may be held by private persons has been reduced; both these measures must be regarded as tending to check consumption. As regards opium smoking, the existing law imposes severe restrictions. The sale of smoking preparations is absolutely prohibited throughout India proper, while private manufacture is only allowed to the smoker himself, or on his behalf from opium lawfully in his possession, and, generally speaking, only to the extent of one tola (180 grains) at a time. The quantity of opium daily used by an opium smoker is so large in comparison with that used by an opium eater, and the inconvenience and difficulty involved in the repeated preparation for smoking are so great, that these restrictions hardly fall short of legal prohibition. Since the end of the period under review the Government of India have, however, announced their intention of taking further steps in the direction of direct and unqualified prohibition. They consider that it is desirable to suppress all public gatherings for the purpose of smoking opium, whether they are called saloons, clubs, or social assemblies, or by any other name whatever, and to prohibit all manufacture of opium smoking preparations save by an individual of a small quantity for his own private consumption. They propose that this prohibition shall apply to the whole of British India, including Burma, and legislation is to be undertaken accordingly. It has been suggested to local governments that this legislation shall provide that an assembly of three or more persons for the purpose of smoking opium should be declared illegal, no exception being made in favour of members of the same family. The Government of India have also suggested a further reduction in the maximum limit of private possession of opium-smoking preparations. They have at the same time re-examined their policy of regulation of opium eating, and contemplate the possibility of further enhancement in the issue price of opium and reductions in the legal limit of private possession. Local governments have been asked also to bring together their rules about morphia and allied compounds, and to examine them with a view to the possibility of amendment in the direction of greater stringency.

The foregoing observations refer, in the main, to India proper as distinct from Burma. The case of Burma as regards opium regulation stands by itself. The consumption of opium, which there usually takes the form of smoking, is not commonly practised by the Burmans; they appear to be specially susceptible to injury from it, and view it in general with disfavour. Consumption is permitted only to non-Burmans, and to a limited number of Burmans specially registered as opium consumers in Lower Burma. In Upper Burma the British Government, having before it the proved injurious effect of opium on the Burmese race in Lower Burma, has absolutely prohibited its sale to or possession by Burmans, except for medical purposes, ever since the annexation of the country in 1886. The prohibition was extended to

(Opium.)

Lower Burma in 1893, but exception was made in favour of Burmans over the age of 25 who had acquired the opium-smoking habit, who were allowed to register themselves as consumers. The total number of persons so registered was about 34,000, including some 20,000 added in the years 1900–03; the number of registered Burman consumers had fallen by the end of 1911–12 to 14,049, and the class of registered consumers must before very long disappear. The arrangements for the sale of opium are in Burma under the closest official supervision, each shop, though let to a private licensee, being placed in charge of a separate resident excise officer. The Burma opium rules were recast and made more stringent in 1910, while amendments of the law, made in the preceding year, gave increased powers in the matter of dealing with persons suspected of unlawfully trafficking in opium, and as regards arresting and searching for the drug. The retail price to consumers, moreover, is fixed at a uniformly high figure, except at a few shops in places where it would be easy to obtain smuggled opium at a lower rate.

The following table shows the quantities of opium issued for consumption in the different provinces, in *seers*,* at the beginning, middle, and end of the decade:—

	1901–02.	1906–07.	1911–12.	Average Consumption per 1,000 of Population, 1911–12.
	Seers.	Seers.	Seers.	Seers.
Madras	35,629	38,104	41,391	1·0
Bombay	46,001	46,864	56,278	2·8
Bengal	92,857	84,890	66,783	1·5
Bihar and Orissa	—	—	36,379	1·5
Assam	48,217	75,668†	60,279	9·1
United Provinces	62,301	68,864	61,810	1·3
Punjab	52,798	59,907	63,481	3·2
North-West Frontier Province	2,535	2,637	2,825	1·3
Burma	39,858	74,731	53,120	5·0
Central Provinces and Berar	29,988	48,372	54,357	3·9
Ajmer-Merwara	1,139	2,798	2,694	5·3
Coorg	38	37	49	·3
Baluchistan	552	649	710	1·7
Total, British India	411,913	503,521	500,156	2·0

† Eastern Bengal and Assam.

The average consumption of opium per head is considerably higher in Assam than in any of the other provinces.

The statistics of consumption are subject to the qualification that they cannot bring to account the undetermined amount of opium illicitly consumed. The figures as they stand show a considerable increase in consumption during the first half of the decade. Some part of the increase, though only a small part, is, of course, attributable to the growth of the population. It is also to be observed that the prevalence of scarcity and plague had gradually reduced consumption during the preceding decade to a very low figure. The subsequent period of recovery synchronised with large additions to preventive establishments, the tendency of which is to increase the recorded consumption by substituting taxed opium for the illicit drug. The large recorded increase in Burma calls for some further explanation. As was noticed in the last decennial number of this Statement, it was recognised towards the end of the preceding decade that the arrangements in force in Burma were not satisfactory; there was extensive smuggling, and the decrease in the recorded consumption was attributed to the replacement of licit by illicit trade. In the opening years of the period now under review steps were taken to make the prohibition more effective. The registers for consumers were temporarily re-opened, the number of shops was increased so as to place a supply of licit opium within reasonable reach of those to whom the law allowed it, and the excise staff was greatly strengthened. The effects were immediately observable in an increase of licit consumption. There was reason, however, to attribute this increase in part to a form of illicit traffic known as "hawking," *i.e.*, the sale of opium by legitimate consumers

* A *seer* is $2\frac{2}{35}$ pounds.

to members of the excluded classes. Measures were taken to deal with this practice, and the recorded consumption, which reached a maximum of over 83,000 seers in 1904–05, has since steadily fallen. The maintenance of a high rate of consumption is explained to a considerable extent by the presence of a rapidly growing Chinese population.

International Conferences.—The opium question was discussed by an International Opium Commission at Shanghai in February 1909, and again at an International Conference at the Hague at the end of 1911. The Convention drafted at the latter creates no new position in regard to opium so far as India is concerned; while in regard to morphia, cocaine, and other similar drugs the Conference, by accepting the view long held by the Indian Government that these drugs are a greater danger to the East than opium, and by inviting the European countries that manufacture them to agree to concerted action, has taken a notable step forward. It may be mentioned here that the Government of India, impressed by the gravity of the danger arising from the growing use in India of cocaine and similar drugs, had already taken such action as lay in their power by prohibiting their importation by post and restricting importation by other means to specially licensed persons. The internal traffic has been brought under strict control by provincial rules, under which the drugs may be sold to private persons only for *bonâ fide* medicinal purposes and on the prescription of a qualified medical practitioner. But such drugs are easily smuggled, and it is realised that there is a large contraband trade, which cannot be suppressed except by securing the strictest regulation and control at the centres of production.

Salt.

From time immemorial a tax on salt has been a source of revenue in India, and it has been held that at the present time it is the only impost that falls on an Indian of moderate means who neither holds land nor goes to law, nor consumes liquor or opium. At the beginning of the decade salt stood easily first, as regards the amount of revenue produced, among the heads of taxation (excluding land revenue); the receipts have since fallen greatly as a result of the reductions in the rates of duty. All salt consumed in British India is subject to duty, the duty on imported salt being at the same rate as the excise duty on salt manufactured in the country, and the receipts under both heads being included in the Salt revenue. Of the total amount of salt consumed in India, from a quarter to a third is imported by sea, mostly into Bengal and Burma, and more than a half of the locally produced remainder consists of sea-salt evaporated by the sun's heat on the coasts of Bombay and Madras. The other important sources are the Sambhar Lake and other brine deposits in Rajputana and the rock-salt mines of the Salt Range and Kohat in the Punjab and North-West Frontier Province. Smaller quantities are produced by evaporation, with artificial heat, from sea-water on the coast of Burma, and from brine wells in the upper division of that province, and as a bye-product in the process of refining saltpetre. Roughly speaking, about a half of the Indian output is produced in Government factories and about a half by private manufacturers licensed under the various excise systems. The principal northern sources, except the Kohat mines, are worked by Government. In Bombay, Baragara salt (from salt-soil brine on the Rann of Cutch) is manufactured by Government, and sea-salt, as a rule, by private persons. In Madras there are both Government and private factories.

All manufacturing and preventive operations in Upper India are controlled by the Northern India Salt Department, which is under the direct administration of the Government of India. The maritime local governments have their own Salt departments.

There has for many years past been a gradual increase in the consumption of salt per head, and, generally speaking, a reduction in retail prices. The facilities for bringing salt to the consumer have been greatly increased by the development of communications, and by other measures, such as the introduction of arrangements under which salt is issued on credit. Concessions have also been made to meet special cases. In Madras and Bombay, in order to reduce the hardship caused by the

(Salt.)

interference of the preventive operations of the salt departments with the use of illicit salt for fish-curing, yards for fish-curing, at which salt is sold at cost price, have been established at all important fishing centres along the coast. Exemption from duty is also granted, under certain conditions, for salt used in manufacturing processes.

Reductions of Duty.—The general rate of duty, which stood at Rs. 2½ per maund (about a halfpenny a pound) from 1888 to 1903, was reduced to Rs. 2 in 1903, to Rs. 1½ in 1905, and finally to R. 1 in 1907. The rate in Burma (for imported salt) was R. 1 per maund throughout. Since 1907, therefore, the duty has been uniform throughout India, except for the comparatively small quantity of salt produced in those districts of Burma in which the system of direct taxation on output has been introduced, where the rate is 10, and was up to 1911 only 8, annas per maund. Salt produced in the mines of the Mandi State, which are worked by the Chief under a special arrangement with the Government of India, is also taxed at a specially low rate, but the output is, in comparison with the total output, a negligible quantity. Kohat salt, which up to 1905 was taxed at a lower rate, is now subject to the same duty as the rest of the Indian output.

Sources of Salt.—The relative importance of the different sources of salt is shown by the marginal table, which gives the amounts produced and imported by sea in 1901 and 1911. The amounts fluctuate greatly from year to year: in 1901, it should be mentioned, production was considerably above the level of preceding and succeeding years. The season of 1911–12, owing to the scanty rainfall, was very unfavourable for manufacture at the Sambhar Lake. The largest quantities of salt are imported from the United Kingdom, though the proportion has fallen, as the figures in the second table show, in recent years. Trifling quantities are imported by land by trans-Himalayan routes, mostly from Tibet.

	1901.	1911.
	Maunds.	Maunds.
Produced in India:		
Burma	585,274	714,186
Bengal	3,040	771
Northern India:		
Punjab mines	2,497,402	3,391,986
Kohat mines	407,048	478,702
Mandi mines	131,776	108,785
Sambhar source	6,697,871	3,544,411
Didwana source	47,204	428,165
Pachbadra source	1,139,710	564,246
Sultanpur works	60,336	32,521
Saltpetre refineries	45,422	62,627
Gwalior	—	1,564*
Sind	310,725	246,206
Bombay	8,817,442	12,302,638
Madras	9,243,079	11,284,102
Total	29,986,329	33,360,910
Imported from other countries by sea	12,608,000	15,015,000

* For the official year 1911–12.

Salt imported from	1901.	1911.
	Tons.	Tons.
United Kingdom	225,097	181,051
Germany	70,276	68,250
Egypt	27,171	60,578
Aden	77,348	80,951
Arabia	49,416	—
Spain	—	68,808
Asiatic Turkey	—	67,468
Other countries	13,841	24,454
Total	463,149	551,560

Consumption and Incidence of Duty.—The table in the margin shows approximately the total consumption of salt in India in each year of the decade. It is not to be regarded as an accurate statement of actual consumption; the figures on which it is based represent for the most part the quantities of salt issued in different provinces on payment of duty, and in the case of Burma include an estimate of part of the local production, which is not accurately measured in all districts. Variations in the quantities of salt held in stock by dealers, which may sometimes be considerable, tend to cause divergencies between these figures and those of actual consumption. They give, however, a sufficiently accurate idea of the progress of consumption over a series of years. Salt issued duty-free to the French and Portuguese Governments, and for fish-curing, &c., is not included. The free issues average about 500,000 maunds a year. As the bulk of the inhabitants of the native states consume British salt, the figures may be taken as representing the consumption in the whole of India. A few states have some local manufacture, but the amount

	Maunds.
1901–02	36,600,000
1902–03	37,400,000
1903–04	38,200,000
1904–05	39,900,000
1905–06	41,300,000
1906–07	43,800,000
1907–08	45,200,000
1908–09	46,100,000
1909–10	46,500,000
1910–11	46,100,000
1911–12	48,200,000

has been very small since the acquisition by the British Government of the Rajputana salt sources. Taking the figures as given in the table, the average consumption of salt per head of the total population rose from a little over 10 lbs. in 1901–02 to about 12½ lbs. in 1911–12, while the incidence of duty per head, calculated in each case at the general rate in force at the time, fell from 4·9 annas to 2·4 annas.

It is to be noted that the greater part of the increase in consumption took place in the years 1903-08, thus coinciding with the reductions of duty. The consumption per head varies greatly from province to province, as the figures in the margin show, and variations equally marked are often to be seen between different parts of the same province. The provincial figures, which are calculated by comparing the quantities produced and issued (or imported) and exported in each province, are subject to the same limitations, in respect of accuracy, as the total figures. In the case of Burma the figure for 1911–12 should be nearer the truth than that for 1901–02, the greater part of the local output being now actually measured. There appears to be no doubt that consumption has increased considerably in Burma, though the province was not affected by the reductions of duty: as will be seen from the next table, prices have fallen there nevertheless. The causes of the geographical variations in consumption are difficult to trace; important factors are the general habits of the people as to diet, the ratio of live-stock to population, the salinity of the soil, the prices of salt, and the financial position of the people. It is to be remembered that the figures include the salt consumed by cattle.

	Average Consumption per Head of Population.	
	1901–02.	1911–12.
	Lbs.	Lbs.
Punjab	7·44	9·42
Kashmir		10·54
N.W. Frontier Province	8·32	9·09
United Provinces	7·64	9·53
Bihar	8·09	12·48
Central Provinces and Berar	11·09	13·88
Rajputana	7·00	9·79
Central India	7·86	
Bengal	11·00	13·32
Eastern Bengal and Assam	—	12·28
Madras (including Mysore and Coorg).	16·10	19·10
Bombay	10·71	13·20
Sind	7·13	10·59
Burma	15·5	17·50

Retail Prices.—The benefits derived by the consumers from the successive reductions in the rate of duty are clearly shown by the figures of retail prices. The following table gives the average retail price in each province year by year, in rupees per maund, as shown in the annual report on "Prices and Wages in India":—

	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.
Upper Burma	3·24	3·01	2·77	2·70	2·82	2·81	2·81	2·65	2·52	2·49
Lower Burma	2·72	2·70	2·57	2·64	2·70	2·73	2·69	2·65	2·57	2·67
Eastern Bengal and Assam	4·07	3·58	3·29	2·89	2·94	2·57	2·33	2·23	2·19	2·36
Bengal	3·79	3·40	3·23	2·85	2·71	2·33	2·14	2·05	2·01	2·13
United Provinces	3·70	3·38	3·22	2·83	2·72	2·32	2·09	2·05	2·07	2·06
Rajputana	3·22	2·86	2·72	2·41	2·34	1·98	1·91	1·89	1·90	1·88
Central India	3·58	3·26	3·13	2·67	2·55	2·20	1·95	1·96	1·98	2·03
Punjab and N.W. Frontier Province.	3·16	2·81	2·74	2·31	2·22	1·86	1·72	1·70	1·70	1·69
Sind and Baluchistan	3·51	3·09	2·95	2·56	2·42	2·23	2·07	2·09	2·03	2·03
Bombay	3·35	3·19	3·02	2·48	2·33	1·98	1·86	1·83	1·88	1·88
Central Provinces	4·18	3·94	3·78	3·28	3·19	2·82	2·53	2·49	2·46	2·49
Berar	3·75	3·65	3·48	3·10	2·90	2·61	2·32	2·26	2·20	2·34
Madras	3·18	2·90	2·91	2·46	2·36	1·95	1·86	1·86	1·84	1·84
Coorg	3·64	3·71	3·54	2·84	2·76	2·54	2·17	2·21	2·22	2·14
Hyderabad	4·44	4·37	4·08	3·67	3·42	3·07	2·89	2·85	2·86	2·86
Mysore	3·43	3·43	3·42	2·96	2·62	2·42	2·24	2·36	2·43	2·40

It is to be observed that the level of prices prevailing since 1907, when the last reduction of duty took effect, is lower than that prevailing before the first reduction in 1903 by about Rs. 1½ per maund, the amount by which, altogether, the duty was reduced. The consumer generally appears therefore to have obtained the full advantage of the reductions, and there is no doubt that, by competition among shopkeepers, the advantage is passed on to the smallest purchasers, even where, as in Southern India, salt is sold by measure and each shopkeeper has his own

(Salt.)

measures. The same fall in prices is naturally not seen in Burma, where rates of duty remained unaltered, though prices there have fallen to some extent. It is safe to say that salt is now far cheaper in India, as a whole, than ever before, the prices being almost everywhere well below a halfpenny a pound.

Improvements in communications have done much both to lower prices and to render them more uniform, but the average still varies considerably from district to district, even within the same province. Among the representative districts included in the return from which the above figures are taken, the extremes, in 1911, were the Tinnevelly district in Madras, with an average price of 1·40 rupees per maund, and the Akyab district of Burma, with an average of 3·13 rupees per maund. There are a few districts where conditions are altogether exceptional and prices range much higher, such as the Ruby Mines district of Burma, where the price in 1910 was over 8 rupees per maund.

Revenue and Expenditure.—As has been seen from the figures given in the last chapter, the net revenue from salt was reduced by about a half during the period under review. The figures below show that the decrease was entirely attributable to the reductions of duty; the receipts from the sales of Government salt increased both in Northern India and in Madras and Bombay, while the expenditure remained at about the same level:—

—	Revenue.					Expenditure.		
	Sale of Government Salt.	Excise on Local Manufacture.	Duty on Imported Salt.	Miscellaneous.	Total.	Refunds and Assignments.	Establishment, Manufacture, &c.	Net Receipts.
	£	£	£	£	£	£	£	£
1902–03	156,955	4,072,701	1,918,371	36,378	6,184,405	252,472	345,891	5,586,042
1903–04	173,594	3,471,875	1,567,800	35,196	5,250,465	268,761	331,191	4,650,513
1904–05	182,734	3,520 278	1,613,435	38,321	5,354,768	261,302	345,102	4,748,364
1905–06	189,519	2,889,467	1,261,972	35,452	4,376,410	266,471	363,166	3,746,773
1906–07	198,544	2,811,290	1,319,118	33,754	4,362,706	267,533	364,489	3,730,684
1907–08	208,883	2,156,551	934,464	39,090	3,338,988	266,610	363,484	2,708,894
1908–09	208,634	2,063,663	965,918	37,944	3,276,159	267,456	343,108	2,665,595
1909–10	207,062	2,086,291	985,390	40,775	3,319,518	264,871	330,743	2,723,904
1910–11	197,136	2,037,543	896,397	44,875	3,175,950	259,183	377,076	2,539,691
1911–12	211,332	2,161,031	974,857	43,993	3,391,212	254,476	368,490	2,768,246

Under the head "Refunds and Assignments" are included payments of over £200,000 a year (more than half of which goes to Jodhpur and Jaipur) to native states and zamindars who have assigned the management of their salt sources to the British Government, and £31,000 a year payable to the French Government under conventions as compensation. Each of the three successive reductions of duty involved a loss of approximately £1,000,000 a year in revenue, and there appears to be no prospect of these losses being made good to any great extent by increases in consumption.

Detailed figures for 1911–12 are given below:—

—	India, General.	Burma.	Eastern Bengal and Assam.	Bengal.	Madras.	Bombay.	Total.
	£	£	£	£	£	£	£
Sales of Government salt	99,308	—	—	—	54,246	57,778	211,332
Excise duty on salt manufactured locally	656,497	25,731	—	69	652,359	826,374	2,161,031
Duty on salt imported from England	—	23,223	29,099	278,487	214	954	331,977
Duty on other imported salt, seaborne	—	98,235	53,125	467,997	211	288	619,856
Frontier duty on salt imported by land	—	—	—	—	—	23,024	23,024
Treaty price of salt	—	—	—	—	—	209	209
Miscellaneous receipts	8,844	—	809	1,522	9,555	14,267	34,997
Rent of warehouses	—	—	299	8,488	—	—	8,787
Total salt revenue	764,649	147,189	83,331	756,562	716,586	922,894	3,391,212
Total salt charges	76,266	1,771	4,953	18,152	115,413	151,206	368,490†

† Including £729 in England.

It will suffice to deal very briefly with the operations of the separate Salt departments.

Northern India.—The Northern India Salt Revenue Department includes within its sphere all the inland provinces—the Punjab and North-West Frontier Province, the United Provinces, the Central Provinces, Bihar, Rajputana, and Central India. The resources of the Sambhar Lake, the most important of the salt sources, were the subject of a prolonged investigation by the Geological Survey Department during the first half of the decade, the conclusion arrived at being that there was enough salt in the lake to meet all demands for practically an unlimited period. Since 1870, when the lake was leased by the Government of India, 160 million maunds of salt have been taken from it, and the financial results show a total credit balance of £290,000. The reductions in the rate of duty have been accompanied by, and no doubt to a great extent account for, a marked decrease in the number of breaches of the salt laws. The number of persons arrested in 1911–12 was 431, as against 1,456 in 1902–03, and the number imprisoned 12, as against 183. Sentences of imprisonment are usually for a month or less; in most cases punishment takes the form of a small fine.

Bengal.—The salt consumed in Bengal is imported from abroad or from other parts of India. In the littoral districts salt production is prohibited, owing to the difficulty of preventing illicit manufacture. The most noticeable features of the import trade during the period under review were the continued decline in the amount of salt from the United Kingdom, which was, roughly speaking, only about a third of the total at the end as against about a half at the beginning of the decade, and the rapid growth in the import from Spain which, beginning with 30,800 maunds in 1904–05, contributed in 1911–12 nearly 1,900,000 maunds. Muscat and the Persian Gulf, which formerly sent large quantities, have fallen out of the list with the disappearance of Arab sailing vessels.

As in Northern India, there has been a great decrease in the number of offences against the salt laws, no doubt largely accounted for by the fall in the price of licit salt. In 1911–12 only four persons were apprehended for offences against the salt law.

Eastern Bengal and Assam.—Eastern Bengal and Assam, like Bengal, depend on imported salt. No offences against the salt laws have been reported for several years past. Their absence is attributed to the cheapness of salt, to the block system of patrolling saline tracts, and to good crops and the better condition of the people.

Madras.—There are two systems of salt manufacture in Madras, under one of which the salt manufactured is sold to Government only and is disposed of by Government to the trade, whilst under the other Government levies an excise duty and allows the manufacturers to make such arrangements as they please for the disposal of the salt. Of the 65 factories worked during 1911–12, 45 were under private and 20 under Government management. The decline in the number of offences against the salt laws has in Madras been very noticeable. In 1911 the number of persons charged with such offences was only 217 as against 6,573 in 1901. The fall in the figures was specially marked after each reduction of duty.

Bombay.—Salt production in Bombay is for the most part in the hands of private manufacturers. In Gujarat, where the works in British territory are owned by Government, manufacture is concentrated at two places—Kharaghora on the borders of the Runn of Cutch, where brine-wells yield the "Baragra" salt, and Dharasna in Surat, where ordinary sea-salt is produced. The remainder of the large number of sea-salt works are owned by, or leased to, private individuals, who manufacture under licence. Considerable quantities of salt also are imported, mostly from Goa. The number of persons arrested for offences in connection with salt smuggling fell from 1,980 in 1901–02 to 118 in 1911–12.

Sind.—The Sind salt supply is derived chiefly from the sea-salt works at Maurypur, at the end of Karachi harbour; smaller quantities are supplied by deposits at Saran

(Salt.)

and Dilyar, and by importation. In June 1902, and again in June 1907, the Maurypur works were seriously damaged, and large stocks of salt destroyed, by inundations due to cyclones. The abolition in 1906 of the system under which salt could not be sold except under licence was credited with a considerable part both in increasing consumption and in diminishing the number of offences. Arrests for salt smuggling numbered 66 in 1911–12, as against 201 in 1901–02.

Burma.—The greater part of the salt used in Burma is imported, a large proportion coming from Germany. In Lower Burma salt is made at scattered points along the coast by boiling sea water, or, in a few places, saline earth, in pots and cauldrons. Manufacture is permitted in ten districts only, and to seven of these the system of direct taxation on output, first introduced in 1902, has now been extended. The rate of duty, as mentioned above, is somewhat lower than for imported salt. In the other three districts, instead of ascertaining the quantity of salt actually produced, the productive capacity of the vessels employed is estimated, and a charge made on each which is supposed to be about equivalent to the duty on imported salt. In Upper Burma the revenue is levied by means of a composition duty on the pots or cauldrons used in manufacture. As the result of an inquiry into the salt industry, some changes were decided upon in 1910. The general policy accepted was the suppression (in the absence of special considerations) of manufacture where it is of slight proportions, its concentration where it is continued, and the enhancement of the excise duty by 25 per cent. The latter change was carried out at the beginning of 1911, when the duty was raised from 8 annas to 10 annas per maund.

Stamps.

The stamp revenue is derived from two great classes of stamps, judicial or court-fee stamps and non-judicial or revenue stamps, provided for respectively by the Court Fees Act of 1870 and the Indian Stamp Act of 1899, as amended in each case by subsequent legislation. The former Act imposes fees on plaints, petitions, and other documents, with specified exceptions, filed before civil, criminal, or revenue courts; the latter imposes duties on commercial transactions recorded in writing, such as conveyances, bonds, cheques, bills of exchange, receipts, and the like. As has already been mentioned, the additional taxation imposed in 1910 included increased stamp duties on the issue of debentures, share warrants to bearer, transfers of shares and debentures, agreements for sale of shares and securities, bills of exchange and probate. The increases were small, and were calculated to yield altogether an additional revenue of about £126,000 a year. There was therefore no marked effect on the figures of total revenue.

The following table gives the details of revenue and charges for 1911–12:—

	India, General.	Central Provinces and Berar.	Burma.	Eastern Bengal and Assam.	Bengal.	United Provinces.	Punjab.	N.W. Frontier Province.	Madras.	Bombay.	Total.
REVENUE.	£	£	£	£	£	£	£	£	£	£	£
Sale of court-fee stamps	19,218	145,991	139,047	559,555	772,101	572,484	225,871	23,581	542,609	258,577	3,259,034
Sale of commercial and other stamps.	9,330	76,805	99,511	182,709	311,877	156,523	109,472	14,075	293,572	232,236	1,486,112
Fines and penalties	296	664	915	1,541	1,739	1,488	1,198	85	5,302	1,369	14,626
Miscellaneous	3,815	571	5,245	306	3,469	2,187	13,928	219	6,878	18,739	55,357
Deduct refunds	*636*	*2,234*	*4,508*	*3,439*	*11,544*	*7,095*	*4,891*	*702*	*9,630*	*10,867*	*55,595*
Net revenue from stamps	32,023	221,797	240,239	740,622	1,077,643	725,588	345,577	37,259	838,731	500,054	4,759,534
CHARGES.											
In India (for collection)	— *106,507*	8,437	6,846	29,663	29,191	18,298	11,793	1,464	29,898	15,176	44,259
In England (stores)											89,931
Total charges											134,190

(Stamps.)

The total net revenue for each year has been given in the preceding chapter; the charges fluctuate considerably from year to year, but are relatively insignificant and call for no comment. The proceeds of the two main heads of revenue and their rates of growth are compared in the marginal table, and the last table shows the growth of revenue under each head for each of the larger provinces separately. In the decade ending with 1901–02, the receipts from court-fee stamps grew faster, proportionately, than those from commercial stamps. The reverse was the case during the period now under review. The very large increase in receipts from commercial stamps in Bombay may be set off against the very small increase—of 1·5 per cent. only—in the preceding decade. A part of the increase was due to a change in the method of accounting.

	Court-fee Stamps.		Commercial and other Stamps.	
	Revenue.	Percentage.	Revenue.	Percentage.
	£		£	
1901–02	2,391,053	100·0	993,351	100·0
1902–03	2,392,627	100·1	1,013,328	102·0
1903–04	2,448,334	102·4	1,062,591	106·9
1904–05	2,549,012	106·6	1,138,752	114·6
1905–06	2,641,020	110·4	1,234,961	124·3
1906–07	2,682,490	112·2	1,293,129	130·2
1907–08	2,813,449	117·6	1,378,658	138·8
1908–09	2,906,004	121·5	1,381,740	139·1
1909–10	3,108,275	130·0	1,385,737	139·5
1910–11	3,312,557	138·5	1,431,469	144·1
1911–12	3,259,034	136·3	1,486,112	149·6

	Court-fee Stamps.			Commercial and other Stamps.		
	1901–02.*	1911–12.	Percentage Increase.	1901–02.*	1911–12.	Percentage Increase.
	£	£		£	£	
Central Provinces and Berar	[100,145]	145,991	[45·8]	[52,512]	76,805	[46·3]
Burma	94,952	139,047	46·5	53,802	99,511	84·9
Eastern Bengal and Assam	[434,906]	559,555	[28·6]	[168,296]	182,709	[8·5]
Bengal	[680,948]	772,101	[13·3]	[286,305]	311,877	[8·9]
United Provinces	431,021	572,484	32·8	126,040	156,523	24·2
Punjab	190,500	225,871	18·5	76,179	109,472	43·6
N.W. Frontier Province	[15,905]	23,581	[48·3]	[9,895]	14,075	[42·2]
Madras	372,267	542,609	45·7	198,890	293,572	47·6
Bombay	248,627	258,577	4·0	129,598	232,236	79·2

* The figures in these columns for the Central Provinces and Berar are for 1903–04, the first complete year in which the figures for Berar are included: the figures for Bengal and Eastern Bengal and Assam are for 1906–07, the first after the territorial rearrangement: the figures for the N.W. Frontier Province are for 1902–03, the first complete year of its existence.

Excise.

The Excise revenue is derived from intoxicating liquors, hemp drugs, and opium consumed in the country, and is levied in the form of duty on manufacture and fees for sale licences. (The proceeds of the excise duty on cotton manufactures are credited to "Customs.") The systems of excise administration are complicated, and vary greatly in different parts of India. The subject can here be treated only in outline: for detailed information reference may be made to the Parliamentary papers mentioned below. Opium has already been dealt with in the first section of this chapter.

Intoxicating Liquors.—The chief forms of intoxicating liquor now consumed in India are country spirit, fermented palm juice (*tari* or toddy), beer made from grain, country brands of rum, brandy, &c., locally manufactured malt beer, and imported wine, beer, and spirits. The first three are made for native consumption; the last three are mainly, but by no means exclusively, used by Europeans and Anglo-Indians. Country spirit is the main source of revenue, except in Madras. It is usually prepared by distillation from the *mahua* flower, molasses and other forms of unrefined sugar, fermented palm juice, or rice.

Though little information is available on the subject of excise before the days of British rule, there is enough to prove that the habit of drinking, and even excessive drinking, was not unknown, and that the native rulers realised revenue therefrom. The British administration inherited a system of farming the revenue, but soon began

to modify it. The policy followed at the present time has been thus summarised by the Government of India :—

"The Government of India have no desire to interfere with the habits of those who use alcohol in moderation; this is regarded by them as outside the duty of the Government, and it is necessary in their opinion to make due provision for the needs of such persons. Their settled policy, however, is to minimise temptation to those who do not drink, and to discourage excess among those who do; and to the furtherance of this policy all considerations of revenue must be absolutely subordinated. The most effective method of furthering this policy is to make the tax upon liquor as high as it is possible to raise it without stimulating illicit production to a degree which would increase instead of diminishing the total consumption, and without driving people to substitute deleterious drugs for alcohol or a more for a less harmful form of liquor. Subject to the same considerations, the number of liquor shops should be restricted as far as possible, and their location should be periodically subject to strict examination with a view to minimise the temptation to drink and to conform as far as is reasonable to public opinion. It is also important to secure that the liquor which is offered for sale is of good quality and not necessarily injurious to health."

The Indian Excise Committee.—The whole question of excise administration in India, in so far as intoxicating liquors are concerned, was investigated in 1905-06 by a committee appointed by the Government of India with the main object of considering reforms in the direction of regulating and restricting consumption. The report of the committee, and the orders passed by the Government of India thereon, have been published as parliamentary papers,* and it is impossible here to refer to them at length. Among the most important of the measures recommended by the committee and approved by the Government of India were advances of taxation in many cases, the further concentration of distillation, the extended adoption of the contract distillery system, and improvements in the preventive establishments and in the staff for controlling distilleries and warehouses. Further references to some of these measures will be found below. The Committee suggested, among other things, the replacement of the existing excise law by fresh legislation on the lines of the Madras Abkari Act. Legislation, following generally on the lines of the Committee's recommendations, has been, or is being, undertaken in the various provinces.

Major Bedford's Investigation.—Reference may also be made here to the investigation carried out by Major (now Sir Charles) Bedford, during the earlier part of the decade, into the "quality, manufacture, and excise control of alcoholic liquors in India." His report showed generally that such injury to health as might arise in India from alcoholic indulgence was due purely to excessive consumption, and not to any specially toxic properties of any particular kind of liquor, and made it clear that the commonly prevailing idea that cheap imported spirit is specially pernicious is unfounded. So, too, it appeared, is the similar idea that out-still spirit, and spirit produced by the crude processes in force in simple central distilleries, are materially worse in quality than even the better classes of imported spirit, or than spirits made in India by European methods (though they were reported to be capable of improvement in some respects, and particularly as regards diminution of acidity).

Distillery Systems.—In view of the prominent part played by country spirits, the arrangements under which they are distilled are a matter of the first importance in the excise administration. As has already been indicated, the British system of excise grew out of the uncontrolled farming system inherited from the native administration. The arrangements now in force in different parts of India mark various stages of advancement. The first distinction to be noticed is that between the "out-still" system and those under which the stills are brought together in distilleries. The out-still system, which may be taken to include all systems prior in order of development to the imposition of a still-head duty, is open to the objection, among others, that there is no control over the rate of duty per gallon. Systems coming under this head were, until recently, in force throughout Assam, over considerable parts of Bengal, the United Provinces, and the Central Provinces, and in smaller tracts in some other provinces. At the beginning of the decade the out-still area constituted rather more than a third of the total excise area, excluding Burma, as compared with more than a half twenty years earlier. The out-still areas have since then been greatly reduced, and it is contemplated that the system will be confined ultimately to a large block of feverish and inaccessible country lying

* Cd. 3327 and 3816, and House of Commons Papers 142 and 209, of 1907.

between Chota Nagpur and the Godavari, and to certain small areas of the United Provinces, Madras, Bombay, and Baluchistan, which, for special reasons, cannot be brought under more advanced arrangements. A far more perfect system is that of the central distillery, in which manufacture and storage are under Government supervision and the liquor pays a still-head duty before issue. The four typical systems in force at the time of the appointment of the Excise Committee in 1905 were described as follows:—

"(i) The system of central distilleries which are mere collections of native potstills in Government enclosures;

"(ii) The contract distillery system of Madras, as worked there since 1901, which has now been adopted as a model in Bengal and the Central Provinces. Under this system the monopoly of supply in a district or other selected area is given out on contract, the contractor issuing his liquor at the rate of excise duty in force, and supplying vendors at a fixed rate determined by tender over and above this duty, while the right of vend is generally disposed of by auction for each shop sanctioned;

"(iii) The Punjab system, where the vendor can procure his liquor from any one of a limited number of licensed distilleries. Here, too, the shops are, as a rule, separately sold by auction;

"(iv) The district monopoly system of Bombay. Here the monopoly granted extends to vend as well as to supply; the contracts are given not by competition, but by selection; the rates of duty are low, and subject to payment of a minimum guarantee, which is ordinarily covered by the amount of duty paid on issues, the contractor pays nothing for the privilege of retail vend."

The view expressed by the Excise Committee, and accepted by the Government of India, was that, in existing circumstances, the most suitable system for most districts is the contract supply system of Madras. The essence of this system is that the contracts for the various districts should be given on the lowest terms, as regards *ex*-duty price of liquor, consistent with the conditions (i) that the contractors should be men who have the means to carry out their contracts in a satisfactory manner, and (ii) that there should be an avoidance of such allocation of the various district contracts as would place the greater part of the country spirit production of a province in the hands of a single distiller or combination of distillers. The system is designed to avoid the dangers of unregulated competition among distillers for the custom of retailers, and it is claimed for it that it ensures more than any other the supply of liquor at a low and constant price for a specified period, with the result that accurate and profitable taxation is facilitated, while the retailer is placed in a position to calculate the fee that he can afford to pay for his licence. The contract supply system has been gradually adopted and extended in all the larger provinces except the Punjab, where no change has been made.

Taxation of Intoxicating Liquors.—The revenue from intoxicating liquors is derived from two main sources, duties on the issues of liquor, and sums paid in respect of the right of retail sale. As will appear from what has been said above, the normal excise system for country spirit, which will under present arrangements eventually prevail over the greater part of British India, is based on the grant by contract of the right of wholesale supply and the sale by auction of the right of retail vend. By these means the dangers of unrestricted competition for the supply of liquor and the attendant difficulties of proper supervision are avoided, while the largest possible proportion of the monopoly profits arising from the restrictions imposed is secured to Government. Spirits produced in distilleries pay a still-head duty; under the out-still system the right to manufacture and sell country spirit at a particular place is, as a rule, sold annually by auction. The revenue from country beer is derived mainly from licences for manufacture and retail sale, while in the case of *tari* revenue is, in Madras and Bombay, obtained from a fixed fee on every tree from which it is intended to draw the liquor, as well as from the sale of the right of retail vend. Spirits and fermented liquors manufactured in India on European lines are, generally speaking, taxed at the same rates as imported liquors and sold under similar conditions. The receipts from the import-duties on foreign liquors are credited to "Customs," but they contribute to the excise revenue through sale licence fees. It should be mentioned that, in a few backward areas among aboriginal tribes, the distillation of spirits and drawing of toddy are allowed free, or subject to the

(Excise.)

payment of very light fees, and similar privileges in respect of country-brewed beer are granted over considerable areas in Bengal and Assam; these privileges have, however, been curtailed in recent years.

The rates of duty on the various descriptions of liquors were raised considerably during the period under review. The excise duties on liquors of the "foreign" type were correspondingly increased as successive additions were made to the import duties, the most important of which are that on beer, which was raised from 1 anna per gallon to 2 annas in 1908, and to 3 annas in 1910, and that on ordinary spirits, raised from Rs. 6 per proof gallon to Rs. 7 in 1906, and to Rs. 9 a. 6 in 1910. The main source of revenue, however, is, as has already been mentioned, the manufacture and sale of "country" spirits. The rates of duty on such spirits vary greatly according to local circumstances, but are in all cases considerably lower than those on foreign spirits. The table below shows the average total incidence of taxation per proof gallon of country spirit in distillery areas for each of the larger provinces at the beginning and end of the decade. Similar figures cannot be given for the out-still areas, where the quantities of spirits issued are not accurately known.

	1901–02.			1911–12.		
	Duty.	Vend Fees, &c.	Total.	Duty.	Vend Fees, &c.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Bengal	3·5	2·1	5·7	4·5	3·1	7·6
Bihar and Orissa	—	—	—	2·0	1·2	3·2
Assam	—	—	—	2·5	2·5	5·0
United Provinces	2·5	1·0	3·5	3·1	1·6	4·7
Punjab	3·9	2·4	6·3	5·0	3·4	8·4
N.W. Frontier Province	4·0	2·6	6·6	5·0	3·7	8·7
Central Provinces	2·1	1·6	3·7	3·5	2·5	6·0
Berar	2·3	1·7	4·0			
Burma	—	—	—	3·6	2·8	6·4
Madras	4·1	2·0	6·1	5·6	2·4	8·0
Bombay	3·4	·3	3·7	4·5	·6	5·1
Sind	4·8	·2	5·0	5·5	·6	6·1

In every case the incidence of taxation shows a considerable increase.

Consumption of Intoxicating Liquors.—It is not possible to give a complete statement of the consumption of intoxicating liquors in India. There is no record of the output of toddy and other native fermented liquors, nor is the quantity of spirits produced in out-stills accurately known. The figures given below will, however, give a general idea of the scale of consumption of imported liquors, and of country spirits in areas under distillery systems—which are now in force over by far the greater part of the country. The imports under the main heads are shown in the following table:—

	1901–02.	1905–06.	1909–10.	1910–11.	1911–12.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
Ale, beer, and porter	3,673,852	5,002,448	4,181,934	4,242,771	4,239,585
Cider and other fermented liquors	4,912	8,907	11,780	11,568	11,283
Whisky	553,971	653,922	644,948	638,341	655,673
Brandy	302,059	406,608	374,209	358,814	336,485
Gin	73,215	79,071	80,811	72,185	73,792
Rum	40,671	84,679	69,479	39,306	50,782
Liqueurs	11,804	15,706	13,335	13,139	14,821
Wines	300,672	341,669	338,500	331,514	335,716

The figures call for little comment. There has been some falling off since 1905–06, when the imports under several heads were larger than in any other year of the decade;

but the figures in that year were abnormal, owing to the rush to avoid payment of the higher duties that came into force towards the end of the year.

	Total Issues for Consumption in Distillery Areas.	Consumption per 1,000 of Population.
	1911–12.	1911–12.
	Gallons.	Gallons.
Bengal	796,784	20
Bihar and Orissa	1,079,535	39
Assam	238,947	40
United Provinces	1,538,504	34
Punjab*	459,796	23
N.W. Frontier Province†	21,580	10
Central Provinces	671,925	‡
Berar	394,955	129
Burma	26,788	‡
Ajmer-Merwara	53,249	106
Coorg	22,308	127
Baluchistan	23,902	69
Madras	1,628,178	41
Bombay	2,705,567	168
Sind	227,467	65

* Indian spirits sold by licensed vendors, including imports from the United Provinces.

† Total retail sales of Indian spirits, including imports from the Punjab and United Provinces.

‡ The out-still areas are scattered, and no separate figures of population in the distillery areas are available.

The issues of country spirits for consumption in distillery areas in 1911–12, and the proportion of issues to population, are shown in the marginal table, in terms of gallons of proof strength. Owing to the extension of the distillery systems, in replacement of out-stills, during the period under review, and to the changes in some of the provincial boundaries, comparable figures for the earlier years of the decade cannot in most cases be given. Some references to the progress of consumption in the various provinces will be found below, in the sections dealing with the provinces separately.

It is, perhaps, hardly necessary to add that the figures given in the second column of the table are purely artificial averages, which, while they give some idea of the relation between total consumption and population, do not show how much the average consumer drinks, nor to what extent, if at all, excessive drinking prevails. The population is not homogeneous, and the proportion of consumers and quantity of liquor consumed vary greatly in different areas, even within the same province, with differences of race, religion, caste and occupation. In Bengal as now constituted, for example, considerably more than a third of the total consumption takes place in Calcutta, and the consumption per 1,000 of the population is in most other districts much below the provincial average given in the table. These facts are to be borne in mind in comparing the averages for different provinces. Taking the population of the distillery areas as a whole, the rate of consumption is very low, even where the average is highest. A clearer idea of the significance of the figures may be conveyed by stating a case in a somewhat different form. It has been calculated that an annual consumption of 50 gallons L.P. per 1,000 of population (a figure well above the average for the whole of India) would mean that, if every woman and child were a total abstainer, every adult male would be able to have a small glass of rum or whisky once in three weeks.

It is difficult to form any estimate of the consumption of *tari* and of country beers. The Excise Committee, taking such data as were available for selected toddy-consuming tracts, roughly estimated the annual consumption per head at about $2\frac{1}{2}$ gallons in Madras and from $\frac{1}{4}$ gallon to $3\frac{1}{2}$ gallons in other provinces. Country beers, made generally from rice, barley, and millets, are largely drunk in some parts, particularly among the aboriginal races of Bengal and Assam, but no figures of consumption can be given. The local output of beer of European type is approximately equal to the quantity imported. The local output of "foreign" spirits is small in comparison with the imports or with the output of country spirits.

The Government of India in 1908, in reporting the result of a consideration of the whole question, pointed out that the admitted tendency for the consumption of alcoholic liquors to increase among certain classes of the population was not difficult to account for, in view of the operation of a number of known causes, among which they mentioned the increasing material prosperity of the people, the steady growth of industrial enterprise, the construction of important public works leading to the more regular and extended employment of labour, the rise in the rates of wages for agricultural and artisan labourers and for domestic servants, the unsettlement of

popular ideas and beliefs, and the relaxation of social and religious restrictions on the use of spirituous liquor owing to the spread of Western education. There appears, on the other hand, to be little ground for doubt that the excise administration has restricted the use of alcoholic liquors by the aboriginal races in India. The Government of India stated their intention of adhering to the policy of checking increased consumption by enhancing taxation; and they pointed out, in conclusion, that except possibly in a few isolated localities the evils arising from drink in India are not to be compared with what may be seen in any town in the United Kingdom. The despatch in which their views were given at length was laid before Parliament.*

Retail vend of Intoxicating Liquors.—The lines on which licences for retail vend are disposed of have already been indicated. The general method for country spirits is that of sale annually, or at intervals of not more than three years, by auction; this method has the great advantage of preventing the growth of vested interests, and is, in the opinion of the Government of India, the best that can be devised for keeping the liquor trade entirely under control, and for securing to Government the highest possible revenue on the lowest possible consumption; the same method is also applied to shops for the sale of toddy and country beer, though in some cases these are licensed at fixed fees. Licences for the sale of "foreign" liquor are usually granted at fixed fees. As regards the number and location of shops, the Government of India in passing orders on the report of the Excise Committee stated as follows the considerations that should govern the decision as to the number of shops to be established in a given area: "If shops are allowed to be so sparse that each has a practical monopoly over a considerable area, prices will inevitably be raised, and illicit practices encouraged. . . . On the other hand, while shops need not necessarily be so limited in number as to make it impossible for a resident in a particular area to get his liquor except from one particular shop, it should only be possible for him to do so at the cost of considerable inconvenience. . . If two or more shops are equally convenient to any considerable number of persons, the fact affords what the Government of India would regard as *primâ facie* evidence that the number of shops in that particular area is excessive." The local governments were invited to consider the subject with reference to these criteria, and with a view to redistribution of shops where the existing arrangement was uneven, and reduction where the number was excessive. The numbers of shops in the different provinces, and the proportion that they bear to the population, are shown in the table on page 208.

Local Advisory Committees.—An advance in the direction of consulting public opinion more systematically regarding the number and location of shops was marked by the orders passed by the Government of India in 1907 as to the formation of excise committees in the larger towns. The licensing authority in India, outside the Presidency towns, is the district officer; the orders in question provided for the formation in the Presidency and other large towns of small committees, including revenue or police officers and municipal representatives, to advise the licensing authority. The extension of the system outside the larger towns, as to the possibility of which the Government of India were doubtful, was left to the discretion of local governments. A return laid before Parliament in 1911† showed that nearly 200 committees had been appointed up to date, many of them with non-official majorities, and that their recommendations in regard to the withdrawal of licences or changes of site had almost invariably been acted upon. It should be added that, where such committees do not exist, various steps are taken to ascertain local opinion. Outside municipal areas, the recognised procedure is that a notice should be put up at or near the proposed site, and published in the locality by beat of drum, and that a local and personal inquiry should be held by the district officer.

---

* Cd. 4488 of 1909. † House of Commons Paper 309.

Hemp Drugs.—The narcotic products of the hemp plant consumed in India fall under three main heads: *ganja*, consisting of the dried flowering tops of the cultivated female hemp plant which have become coated with resin in consequence of being unable to set seeds freely; *charas*, the name applied to the resinous matter which forms the active principle when collected separately; and *bhang*, the name given to the dried leaves of the hemp plant, whether male or female, cultivated or uncultivated. *Ganja* and *charas* are used principally for smoking, and *bhang* for the preparation of a drink; but *ganja* and *bhang* are also eaten. The plant grows wild in many parts of India; the use of hemp drugs appears to have been practised from time immemorial, and enters into the religious and social observances of the Hindus. The policy now in force is based on the recommendations of the Hemp Drugs Commission of 1893; the main features are restricted cultivation under supervision, storage in bonded depôts, payment of a quantitative duty before issue, retail sale under licence, and restriction on private possession. The production and consumption of hemp drugs in Burma (except for medicinal purposes) are altogether prohibited, in order to prevent the habit from arising in a province where it does not at present exist. No restriction is placed on the use of the wild plants in the green state or on their cultivation for the manufacture of fibre. *Ganja* forms the principal source of hemp drugs revenue in Bengal, Assam, the Central Provinces, Madras, and Bombay, while *charas* (which comes mostly from Central Asia) is consumed mainly in Northern India. *Bhang* is consumed to some extent in all provinces. The rates of duty, which were for the most part raised during the decade, vary from Rs. 5 to Rs. 11 per seer for *ganja*, and from Rs. 6 to Rs. 16 per seer for *charas*. *Bhang* is taxed at lower rates, and in some provinces by acreage and transport duties only. Licences which cover the retail sale of all forms of hemp drugs are usually sold by auction.

The table shows the quantities of the different hemp drugs sold by retail, per 10,000 of population, in 1901–02 and 1911–12:—

	1901–02.				1911–12.			
	Ganja.	Charas.	Bhang.	Other Sorts.	Ganja.	Charas.	Bhang.	Other Sorts.
	Seers.	Seers.	Seers.	Seers.	Seers.	Seers.	Seers.	Seers.
Bengal	27·3	·1	5·5	—	27·5	·4	7·2	—
Bihar and Orissa	—	—	—	—	29·2	—	6·9	—
Assam	39·0	—	—	—	52·0	—	·3	—
United Provinces	2·7	19·6	71·2	—	2·9	11·3	50·5	—
Punjab	—	14·6	45·9	·3	—	13·8	46·5	·4
North-West Frontier Province	—	17·0	27·7	·4	—	12·7	33·2	·1
Central Provinces	27·2	—	1·6	—	36·5	1·1	1·6	—
Berar	19·8	—	2·2	—	33·0	·2	1·0	—
Madras	7·4	—	·4	2·8	9·3	—	·4	2·0
Bombay	15·1	—	3·2	1·7	31·0	—	4·9	2·6
Sind	2·7	—	307·4	27·7†	2·2	42·7	322·4	—
Ajmer-Merwara	·4	12·9	33·7	1·6	·3	13·7	39·9	6·0
Coorg	37·5	—	—	—	23·7	—	—	—
Baluchistan	·3	36·6	79·5	—	·3	25·0	24·4	—

Note.—A seer is $2\frac{2}{5}$ lbs.

† Mostly *charas*.

The most noticeable feature is the large consumption of *bhang* in Sind, where this mild intoxicant is in general use as a cooling beverage during the long hot weather. The consumption per head of *charas* has fallen in Northern India. In Sind, where it has increased, the duty on the drug was raised from Rs. 8 to Rs. 12 per seer in 1911, and to Rs. 16 per seer in 1912.

Total Number of Shops.—A detailed statement of the numbers of retail shops in 1911–12 is given below. The figures in the second column include special licences for retail sale otherwise than in ordinary retail shops—as in hotels, clubs, and steamers. Licences for the sale of opium for medical purposes, and for temporary

(Excise.)

shops and stalls in the Central Provinces and Bombay, are not taken into account. "Other drugs" means, generally speaking, hemp drugs: but in some provinces shops licensed for the sale of cocaine, morphia, &c. are included:—

—	Shops for Retail Sale of					Total Shops in 1911–12.	Total Shops in 1901–02.	Number of Persons in 1911–12 per Shop for Sale of			
	Country Spirits.	Imported and Indo-European Liquors.	Toddy and other Indian Fermented Liquors.	Opium.	Other Drugs.			Country Spirits.	Toddy, &c.	Opium.	Other Drugs.
Bengal	1,277	992	3,293	1,022	2,169	8,753	25,254	35,492	13,763	44,347	20,896
Bihar and Orissa	2,085	189	8,788	661	1,734	13,457	—	16,542	3,924	52,178	19,890
Assam	190	99	15	409	257	970	1,374	34,854	441,495	16,191	25,768
United Provinces	4,767	271	3,049	1,131	3,517	12,735	15,408	9,897	15,474	41,717	13,415
Punjab	1,042	295	40	911	574	2,862	4,276	23,746	498,659	21,895	34,750
North-West Frontier Province	37	46	5	70	75	233	269	60,844	407,999	32,160	30,016
Burma	105	418	1,106	124	—	1,753	2,140	100,331	9,525	84,958	—
Central Provinces	3,119	129	352	746	921	5,267	8,599	3,482	30,857	14,521	11,793
Berar	693	15	155	298	189	1,350	2,665	4,410	19,717	10,255	16,170
Madras	9,444	797	15,489	955	617	27,302	31,286	4,386	2,565	43,377	67,139
Bombay	2,148	375	2,704	789	569	6,585	5,698	7,501	834*	20,422	28,318
Sind	255	26	4	251	506	1,042	1,141	13,778	878,358	13,997	6,943
Ajmer-Merwara	128	5	4	41	16	194	213	3,917	125,348	11,938	31,337
Coorg	36	8	103	3	5	155	614	4,860	1,699	58,325	34,995
Baluchistan	61	19		59	68	207	†	6,793	—	7,024	6,094
Total 1911–12‡	25,326	3,665	35,407	7,411	11,149	82,658	—	9,626	6,944	32,894	21,866
Total 1901–02‡	31,259	2,814	44,600	8,911	11,353	—	98,937	7,396	5,184	25,945	20,364

* This figure takes into account domestic consumption licences. † Figures not available. ‡ Excluding Baluchistan.

A comparison with the figures for 1901–02 shows an all-round reduction in the number of shops. Specially noticeable decreases are in country spirit shops in the Central Provinces, from 6,003 to 3,119, and in toddy shops in Coorg, from 541 to 103. There were specially marked reductions also in country spirit shops in the United Provinces and the Punjab, in toddy shops in Bengal, the United Provinces, Burma and Madras, and in opium shops in the Punjab and Assam. Toddy shops in Bombay and opium shops in Burma increased in number. The reasons for the latter increase were noticed in dealing with opium.

Revenue.—It has already been shown, in the chapter on Finance, that the total net receipts from excise increased rapidly and continuously during the period under review. The table below shows how the increase (taking in this case gross receipts, as stated in the Finance and Revenue Accounts, in round figures) was distributed among the provinces:—

—	1901–02.	1903–04.	1905–06.	1907–08.	1909–10.	1911–12.
	£	£	£	£	£	£
Bengal	1,002,000	1,086,000	1,123,000	1,139,000	1,119,000	1,295,000
Eastern Bengal and Assam	189,000*	202,000*	308,000	453,000	487,000	552,000
United Provinces	494,000	631,000	665,000	596,000	578,000	742,000
Punjab	174,000	187,000	237,000	281,000	288,000	427,000
North-West Frontier Province	5,000	14,000	14,000	17,000	21,000	21,000
Central Provinces†	130,000	304,000	480,000	487,000	459,000	608,000
Burma	362,000	498,000	553,000	524,000	510,000	486,000
Madras	954,000	1,180,000	1,274,000	1,538,000	1,796,000	2,004,000
Bombay	702,000	800,000	951,000	1,092,000	1,170,000	1,353,000
India, General	65,000	79,000	81,000	101,000	109,000	121,000
Total	4,077,000	4,980,000	5,688,000	6,227,000	6,538,000	7,610,000

* Assam only. † Berar included from October 1902.

(Excise.)

The excise expenditure rose from £166,000 in 1901–02 to £419,000 in 1911–12, as a result of the extensive measures of reorganisation and additions to the strength of the preventive establishments carried out during the decade.

The relative importance of the various sources of excise revenue in 1911–12 is shown in the following table:—

——	India, General.	Central Provinces and Berar.	Burma.	Eastern Bengal and Assam.	Bengal.	United Provinces.	Punjab.	N.W. Frontier Province.	Madras.	Bombay.	Total, 1911–12.	Total, 1901–02.
Revenue.	£	£	£	£	£	£	£	£	£	£	£	£
Licence and distillery fees and duties for the sale of liquors and drugs, viz.:—												
Foreign liquors	1,948	1,222	75,859	7,132	19,946	22,074	12,921	2,220	55,644	23,642	309,312	274,944
Liquors and spirits made in India after European method.	13,234	94	28,688		16,919		23,714	—		4,056		
Country spirits	87,809	442,305	124,534	182,949	650,998	493,241	269,535	7,165	865,949	1,033,700	4,158,185	1,996,918
Country spirits and toddy combined	—	—	—	—	—	—	—	—	60	13,057	13,118	11,691
rents.												
Toddy revenue	5,895	9,340	49,136	2,880	105,087	19,304	—	—	933,658	110,692	1,235,994	690,010
Opium and its preparations	4,920	52,889	9,150	56,299	59,165	22,521	35,933	4,020	32,360	24,798	302,054	249,050
Other drugs: ganja, bhang, &c.	3,425	21,823	12	75,268	119,228	132,483	46,844	5,111	20,627	29,543	454,364	267,946
Pachwai revenue	—	—	—	2,150	58,191	—	—	—	—	—	60,340	*
Acreage on land cultivated with the poppy	—	—	—	—	—	—	1,559	—	—	—	1,559	1,583
Transit duty on excise opium	235	—	3,439	—	—	—	1,862	1,050	—	42,210	48,796	425,472
Gain on sale proceeds of excise opium and other drugs.	784	58,263	189,400	149,437	132,794	52,145	34,230	1,509	66,806	12,790	698,158	
Duty on ganja	—	20,217	—	74,667	130,644	—	—	—	21,203	52,399	299,130	141,028
Fines, confiscations, and miscellaneous	3,119	1,348	6,227	1,331	2,237	352	87	1	7,970	6,069	28,741	18,039
Total	121,369	607,501	486,443	552,113	1,295,209	742,119	426,687	21,076	2,004,278	1,352,956	7,609,753	4,076,681
Deduct refunds	*103*	*1,447*	*1,413*	*330*	*978*	*1,206*	*707*	*5*	*2,772*	*15,904*	*24,865*	*14,750*
Net revenue from excise	121,266	606,055	485,031	551,783	1,294,231	740,913	425,979	21,072	2,001,506	1,337,052	7,584,888	4,061,931
Charges.												
Salaries and establishments	8,172	14,216	33,072	13,513	41,067	19,581	8,128	568	94,953	50,403	303,672	113,099
Other heads	1,996	5,114	26,459	7,889	19,715	6,579	3,296	405	23,949	20,067	115,582	52,156
Total	10,168	19,330	79,531	21,402	60,782	26,160	11,424	973	118,902	70,470	419,253	166,155

* Not shown separately.

In dealing with the separate provinces only some of the most important points can be noticed. The figures quoted are taken from the provincial administration reports.

Bengal, Bihar and Orissa, and Assam.—The most noticeable features of the decade in Bengal and Assam were the great reduction of the out-still areas and the introduction of the "contract supply" system. In 1902 the whole of Assam was under out-still systems, while Bengal, as then constituted, was divided, roughly speaking, about equally between the "central distillery" system in the south and east, and the out-still system in the north and west. During the decade the distillery system was extended over the greater part of Bihar, a number of districts in the north-east of Bengal, and almost the whole of Assam, so that in 1912 the only out-still areas remaining, outside Chota Nagpur, the greater part of which is still under the out-still system, were

Gross Receipts from	Bengal.		Bihar and Orissa, 1911–12.	Assam.	
	1901–02.	1911–12.		1901–02.	1911–12.
	£	£	£	£	£
Imported liquors (licence fees)	22,495	23,613	1,883	1,272	1,023
"Foreign" spirits locally manufactured	15,469	13,284	—	246	—
Country spirits:					
Distillery areas	230,209	405,616	227,761	—	79,432
Out-still areas	237,906	6,494	113,329	46,854	1,386
Locally-brewed beer	327	1,239	—	—	—
Tari	70,015	28,433	79,529	17	6
Pachwai	36,051	54,495	8,495	57	—
Opium and its preparations	174,685	150,753	78,708	114,067	168,157
Hemp drugs	213,224	206,238	147,713	26,317	45,923
Miscellaneous	1,305	2,481	1,686	39	334
Total	1,001,687	892,647	659,103	188,869	296,261

(Excise.)

a small portion of Bihar, parts of Orissa, the Chittagong division in Bengal, and a few hill districts in Assam. The contract supply system was in force at the end of the decade in all distillery areas except the Dacca division, where the central distillery system remained in force. *Pachwai*, or rice beer, which makes an appreciable contribution to the excise revenue in Bengal, is consumed chiefly by aboriginal tribes, and by the lower classes in some parts. Measures were taken from 1909 onwards restricting the privilege of home brewing, with a view to securing a better control of consumption. Other reforms of some importance, introduced in Bengal in 1906–07, were the prohibition of the sale of intoxicants of all kinds to children under 14 years of age and the issue of excise licences for the sale of medicated liquors. In Assam the opium revenue is more than half of the total excise revenue, the Assamese being large consumers of opium. Consumption fell to its lowest point in 1901–02, a year of severe scarcity. The natural tendency towards increased consumption with returning prosperity has been checked, as far as is practicable, by a great reduction in the number of shops and by taking steps to force up the retail price of the drug. It is reported that the introduction of the contract supply system in Assam has done much to check drunkenness, the prevalence of which among the immigrant tea-garden labourers in the early years of the decade had made it necessary to take special remedial action.

Illicit traffic in opium and cocaine has given a good deal of trouble in Bengal. The report for 1911–12 shows that the preventive force did good work under this head during the year.

New Excise Acts, consolidating the law and introducing numerous amendments, were passed in Bengal in 1909 and in Eastern Bengal and Assam in 1910.

United Provinces.—The table shows the growth of gross receipts. The figures for "foreign" liquors include receipts in respect of the output of rum from the Rosa Distillery at Shahjahanpur, much of which is exported to other provinces, and of beer from a number of breweries worked on European lines. The increases of revenue were due to a large extent to enhanced taxation. The greater part of the United Provinces, including all the more fully developed and thickly populated districts, was under distillery systems throughout the decade. The simple central distillery system was replaced by the contract supply system in 15 districts in 1909, and the latter system has been further extended since. The areas under the out-still and farming systems (the latter being, practically, the out-still system with the shops let in groups instead of separately) are in thinly populated and comparatively inaccessible boundary tracts. They were considerably reduced during the decade. The most important feature of the year 1911–12 was the general introduction into Bundelkhand of the contract supply system. The marked decline in the consumption of *charas* was a satisfactory feature of the decade. The issues of country spirits in distillery areas were 1,538,504 proof gallons in 1911–12, as compared with 1,282,766 proof gallons in 1901–02, the increase being due mainly to the extension of the distillery area.

Gross Receipts from	1901–02.	1911–12.
	£	£
"Foreign" spirits and malt liquors	42,558	21,143
Country spirits:		
Distillery areas	298,568	485,876
Out-still areas	31,359	8,147
Farming areas	3,597	89
Fermented liquors (*tari*, &c.)	9,916	19,304
Opium and its preparations	53,256	74,541
Hemp drugs	87,740	133,823
Miscellaneous	186	526
Total	527,180	743,449

Note.—The figures for 1901–02, from the provincial report, are for the year ending 30th September, and do not agree, therefore, with those for the financial year on page

A United Provinces Excise Act, on the lines recommended by the Excise Committee, was passed in 1910.

Punjab.—The increase during the decade in gross excise receipts in the Punjab was very marked. As will be seen by reference to the tables on pages 194 and 207, the increase in the case of opium and hemp drugs was due very largely to higher taxation, but there was a large addition to the recorded consumption of country spirits, the sales by licensed vendors increasing from 253,909 to 459,796 proof gallons, or from 12½ to 23 gallons per 1,000 of population, between 1901–02 and 1911–12. To some extent this may have been due to replacement of illicit spirit; illicit distillation has long been very prevalent in the Sikh districts of the Central Punjab, and continued on a large scale in some parts in spite of every effort to check it. Extensive smuggling from native states is also reported. In view of the strengthening of the excise staff, and of the fact that the best public opinion is at last strongly on the side of temperance, the local government now propose to undertake an energetic and organised campaign against illicit distillation in those districts in which it is most widely prevalent. In certain districts there has been a serious increase in drunkenness, and the growth of consumption, though no doubt largely a sign of the increasing prosperity of the people, has been viewed with much concern by the local government. The consumption for the province as a whole remains low in proportion to the population, the Muhammadan community being generally abstainers; but in the Sikh districts the consumption of intoxicants has shown a considerable increase. Measures have been taken to combat the tendency to excessive drinking, and the number of shops has been steadily diminished where this is practicable; but the hope of effective reform depends largely on the possibility of arousing popular opinion to maintain the former customary restrictions on excessive indulgence. One favourable sign of the times is the formation of a number of temperance societies, including a Sikh Temperance Association with a large membership in the Lyallpur district.

Gross Receipts from	1901–02.*	1911–12.
	£	£
Imported liquors (licence fees)	5,208	12,806
Malt liquors	8,105	19,196
Country spirits	95,174	271,333
Native fermented liquors (*tari*, &c.)	195	234
Opium and its preparations	39,356	73,620
Hemp drugs	18,942	46,818
Miscellaneous	53	99
Total	166,973	424,106

* Omitting districts transferred to the North-West Frontier Province.

The nature of the Punjab distillery system has already been indicated.* It remained practically unaltered throughout the decade after the last of the central distilleries of the old type, worked after the primitive native methods, disappeared in 1903–04. The out-still system prevailed in 1902 only in a few small areas, and was abolished altogether in 1910. Native fermented liquors are in very little request in the Punjab; but a growing taste for beer has been noted.

A new Excise Bill, intended to improve the excise administration in several directions, has been under consideration.

North-West Frontier Province.—The excise receipts in respect of country spirits in the North-West Frontier Province are no guide to the consumption, as a large part of the supply comes from the Punjab and United Provinces, where the duty is brought to account. The rural population do not drink, and the consuming classes are foreign to the province, consisting of military followers, labourers on public works, and a few residents in the cantonments and larger towns. The total retail sales of Indian spirits were rather less in 1911–12 than in 1901–02. Illicit distillation and excessive drinking are practically unknown. The local supply of spirits was produced up to 1907 at two central distilleries; distillation was subsequently concentrated in a single distillery, with an improved system, at Bannu, and the contract supply system was introduced. The distillery, however, did not pay, and was closed in 1912. Supplies will in future be drawn from the Punjab. There are no out-still areas.

Gross Receipts from	1901–02.	1911–12.
	£	£
Imported liquors (licence fees).	913	2,220
Country spirits	6,149	7,145
Opium and its preparations	2,497	6,579
Hemp drugs	2,427	5,111
Miscellaneous	7	1
Total	11,993	21,056

* *See* page 203.

(Excise.)

Opium is largely produced in Afghanistan, and the smuggling of Afghan opium over the western boundary of the province is difficult to check.

Central Provinces and Berar.—In connexion with the figures of gross revenue, given in the margin, it is necessary in the first place to point out that consumption and revenue in the Central Provinces had fallen to a very low level as the result of the severe famines of the preceding decade, and that in 1901–02 the process of recovery was only beginning. There has no doubt, with returning prosperity, been on the whole a considerable increase of consumption, though the total issues of country spirits in distillery areas fell greatly in 1908–09, and in the last year of the decade were still lower than they were in 1906–07 and 1907–08; but the changes in the excise systems in recent years make comparison with earlier years difficult. The local government have expressed themselves as satisfied that there has been no such spread of the drinking habit as to cause alarm, and that there is no reason to suppose that the habit is spreading to classes who formerly abstained. Much was done during the decade to secure a better control of the traffic in liquors and drugs. The out-still area was greatly reduced, and the contract supply system was applied to the whole of Berar and gradually extended elsewhere, from 1905 onwards, in replacement of the central distillery system. The number of shops was also very greatly reduced. The excise revenue in 1911–12 was the highest on record, showing an increase of more than £100,000 on the figures for 1910–11. The bulk of the additional revenue was derived from country liquor, but the increase was not attributable to any great extent to increased consumption. The figures for the year confirm the view that the advance in the excise receipts in recent years has been due to higher taxation and improved administration, and not in any way to a pernicious increase in the drink or drug habit. The abolition, during 1911–12, of the sadar distillery in one district, and of 92 out-stills in various parts, added 6,900 square miles to the contract supply area and brought the total area under that system to over 70,000 square miles, or about seven-tenths of the total area of the province. Some 7,000 square miles remained under the sadar distillery system, and 22,600 square miles, in backward and "jungly" tracts, under the out-still system.

Gross Receipts from	1901–02.	1911–12.
	£	£
Foreign liquors and beer	1,588	1,316
Country spirits:		
Distillery areas	94,483	423,570
Out-still areas	52,980	18,735
Tari	2,991	9,340
Opium and its preparations	63,421	144,917
Hemp drugs	14,683	42,040
Miscellaneous	1,814	1,349
Total	231,960	641,268

A Central Provinces Excise Bill was introduced in the Governor-General's Legislative Council in September 1911.

Burma.—There are special restrictions on the consumption of exciseable articles in Burma, based on the view that drugs and liquors are exceptionally deleterious in the case of Burmans. The policy adopted with regard to opium has been described in the first section of this chapter, and mention has already been made of the restrictions on the consumption of hemp drugs. In the case of liquors, there is in Upper Burma a prohibition against the sale of any intoxicant, except *tari*, to a Burman.

Gross Receipts from	1901–02.	1911–12.
	£	£
Imported and "foreign" liquors	81,009	87,373
Country spirits:—		
Distillery areas	—	11,505
Out-still areas	8,895	3,501
Locally-brewed beer	2,434	4,467
Native fermented liquors	109,202	171,291
Opium and its preparations	205,338	228,418
Other drugs	1	9
Miscellaneous	3,198	5,909
Total	410,077	512,474

The gross receipts, as stated in the provincial reports, are shown in the margin. The opium revenue, which contributes the largest proportion of the receipts, has fallen steadily, with the licit consumption, since 1904–05, when it reached a maximum of over £344,000. The contract distillery system has been adopted in some districts since 1906. The manufacture and sale of spirit under the out-still system is permitted only in places where there is an ascertained demand for such liquor, and where the shops can be constantly supervised. The number of out-stills fell from 47 in 1901–02 to 22 in 1911–12. There has been in the last few years an increase,

judging by the seizures of illicit imports, in the use of morphia and cocaine. It was decided in 1911–12 to extend the contract distillery system, with a view to the substitution of country spirit for cheap foreign spirit and country beer, and to the better control of the production and sale of alcoholic liquors in the province. An Excise Bill for Burma is under consideration.

Madras.—Madras is peculiar among the provinces in that the greatest proportion of the excise revenue is derived from toddy. In 1911–12 the number of trees licensed in tree-tax areas was 2,802,980. They are taxed at rates varying, for different species and in different areas, from R. 1 a year to Rs. 7½ for six months. As the figures in the margin show, there was during the decade a great increase in the gross revenue under all heads. The increase in consumption —which as regards country spirits in distillery areas was put at 1,628,178 proof gallons, or 41 gallons per 1,000 of population, in 1911–12, as against 875,755 gallons, or 24 gallons per 1,000, in the rather smaller distillery area of 1901–02—was ascribed partly to the substitution of licit for illicit drink, but mainly to the advancing prosperity of the drink-consuming classes. Successive increases were made from time to time in the rates of duty, and the number of shops was substantially reduced, with a view to checking the advance in consumption, but the main factor appears to be the amount of money available. It is, however, satisfactory to note that the consumption of country spirit, which reached a total of 1,707,136 proof gallons in 1908–09, has been considerably lower in subsequent years.

Gross Receipts from	1901-02.	1911-12.
	£	£
"Foreign" liquors	24,972	40,664
Country spirits	357,969	864,018
Beer	3,249	14,314
Toddy	497,089	930,514
Opium and its preparations	49,480	102,008
Ganja, bhang, &c.	16,856	42,105
Miscellaneous	4,303	8,131
Total	953,918	2,001,755

The contract distillery system has been the sole distillery system in Madras since 1901, when it was introduced in view of the fact that the existing private distillery supply system threatened to become a monopoly in the hands of a single firm. The out-still areas are relatively small, and were reduced to some extent during the decade. In 1911–12 out-still systems prevailed over about 19,000 square miles, with a population of 1,419,500 and 720 shop and still licences.

Bombay and Sind.—A number of distillery systems were in force in Bombay during the earlier years of the decade, of which the district monopoly system, described above, was the most widespread. This system has remained in a few districts, but the contract supply system has been introduced in the greater part of the Presidency, including Sind. In Bombay town and island a "free-supply" system was in force. The out-still area is insignificant. The growth of revenue, so far as it is due to increased consumption and not to increase of taxation, was attributed mainly to the growing prosperity of the people. As was shown in the last decennial number of this Statement, the consumption had declined, in the closing years of the decade ending in 1901–02, owing to famine.

Gross Receipts from	Bombay proper.		Sind.	
	1901-02.	1911-12.	1901-02.	1911-12.
	£	£	£	£
Imported liquors (licence fees)	8,458	13,225	1,229	2,339
"Foreign" and Indo-European liquors	3,209	4,025	45	—
Country spirit	446,434	931,598	56,411	92,458
Toddy	91,692	132,495	95	69
Opium and its preparations	40,409	64,708	8,734	15,991
Other drugs	14,606	48,047	16,895	33,931
Miscellaneous	9,567	6,220	1,065	21
Total	614,375	1,200,319	84,474	144,809

Note.—Figures for 1901–02 are for the year ending 31st July.

(Excise.)

Between 1901–02 and 1911–12 the issues of country spirits in distillery areas rose in Bombay from 1,792,618 proof gallons, or about 117 gallons per 1,000 of population, to 2,705,567 gallons, or about 168 per 1,000, and in Sind from 168,225 gallons, or about 52 per 1,000, to 227,467, or 65 per 1,000. Practically the whole of the increase took place in the first half of the decade. There was a fall in the consumption of country spirits in Bombay City in 1911–12, attributed partly to an increase in the rates of duty, partly to the closing of a number of shops, and partly to a curtailment of the hours for selling liquor. The opening hour for all liquor shops in Bombay City, except toddy shops, was fixed during the year at 9.30 a.m., and the closing hour for all shops at 9.30 p.m. Taking Bombay proper as a whole, there was in 1911–12 a small decrease in the quantities of liquor and opium consumed, while the consumption of intoxicating drugs remained stationary. In Sind the total consumption of country liquor continued to increase. The doubling of the duty on *charas* in Sind was noticed in the section dealing with hemp drugs. The Bombay Abkari Act of 1878 was amended in various respects, mainly on the lines recommended by the Excise Committee, in 1912.

Provincial Rates.

As was explained in the chapter on Finance, the importance of this head of the accounts of the Government of India was greatly diminished by changes made during the period under review.

Provincial rates, which exclude municipal taxes, are levied chiefly for the construction and repair of roads, the up-keep of schools and dispensaries, village sanitation, and other local expenditure. They are generally assessed on the annual "assets" or rent value of land, which are calculated variously in different provinces, according to the nature of the prevailing system of land tenure.

Acts authorising the levy of land cesses on the land rental were passed in Bombay, Madras, Bengal, the United Provinces, and the Punjab between 1865 and 1871, and in the Punjab and Oudh cesses for roads, schools, and the district post, assessed at the time of the land revenue settlement, were continued side by side with the new general cess. Similar settlement cesses were levied in the Central Provinces, Burma, and Assam. Subsequently a special public works cess, at a maximum rate of half an anna in the rupee, was added in Bengal, and some of the existing cesses were raised, while a general cess was substituted for the settlement cess in Assam and Burma.

In 1905 financial prosperity enabled the Government of India to give substantial assistance to local funds, and annual grants from Imperial revenues were promised to all local boards in India, to an extent approximately equal to one-fourth of their income from the land cess. At the same time the extra famine cesses imposed in 1877–8 in the United Provinces, the Punjab, and the Central Provinces, producing about £150,000 a year, were abolished. In 1906 further steps in the same direction were taken, various *patwari* and village service cesses in a number of provinces, which produced over £500,000 a year, being abolished, together with the district post cesses, while some petty appropriations formerly made from the funds of local boards to meet the cost of normal schools, the establishment in Government offices for local purposes, and the like, were discontinued.

The liability for maintaining the various services of the cost of which the agricultural tax-payer was thus relieved was transferred to Imperial revenues. The Government of India, in announcing these changes, expressed the hope that they would go a long way towards placing the system of local taxation on a sound basis. The arrangement at which they desired to aim was that no local cesses should be imposed on the land, supplemental to the land revenue proper, except such as are levied by or on behalf of local authorities for expenditure by them on genuinely local objects. It was impossible at once to attain to this ideal; but by remitting or transferring to the local accounts in the two years 1905–07 items aggregating about £736,000 a year, not only was substantial relief afforded to the tax-payers, but most of

the more important excrescences that had grown up round the system of local taxation were cleared away.*

At the present time a general cess on the annual value of land is levied throughout British India for local purposes at a rate which is in general equal, or nearly equal, to one anna in the rupee; in Madras a district board may, with the sanction of the local government, increase this rate by 3 pies in the rupee for the purpose of constructing local railways or tramways. The cess is usually collected with the land revenue. The proceeds are administered to a large extent, and in some provinces wholly, by district boards and other local authorities, and the revenues so administered have since 1908 been excluded from the general accounts of the Government of India. The receipts credited in those accounts in 1911–12 under the head Provincial Rates amounted to £548,680, of which £372,712 was on account of the public works cess in Bengal and Eastern Bengal, and £147,150 on account of the appropriation from local rates for the payment of rural police in Agra. The total receipts under the head district local fund cesses (not included in the general accounts) in the same year were:

Customs.

General import duties, which had been abolished in 1882, were re-imposed in 1894, since which date the general rate of duty on commodities imported into British India by sea has been 5 per cent. *ad valorem*. The tax is levied for fiscal purposes, and not for the protection of Indian industries. For as many articles as possible tariff valuations are fixed, which are revised from time to time, a general revision being carried out in December of each year. Certain classes of imports are exempted from payment of customs duty, and in other cases special rates are prescribed. The most important items on the free list are machinery (excluding tools and implements to be worked by manual or animal labour), railway materials, gold, living animals, grain and pulse, coal, raw cotton, raw wool, cotton twist and yarn and sewing and darning threads, printing materials, and books (but not paper). Articles subject to special rates of duty include manufactured cotton goods, which pay 3½ per cent. *ad valorem*, vinegar and copperas, which pay 2½ per cent., and iron and steel, which pay generally 1 per cent. Special import duties are imposed on arms and ammunition, alcoholic liquors, opium (the duty on which is intended to be, and is practically, prohibitive), petroleum and salt, and, since 1910, on silver and tobacco, and have been imposed on sugar in the special cases referred to below. The only general export duty of any importance for many years past has been that on rice and rice-flour, which is at the rate of 3 annas per maund, or about 4*d*. per cwt. Since 1903 a trifling duty of ¼ pie per lb. has also been levied on tea produced in India and exported therefrom. This duty was imposed at the request of the tea industry, and Government acts merely as a collecting agency, the proceeds (about £20,000 a year) being paid to a representative Tea Cess Committee and applied to increasing the consumption and sale of Indian tea.†

The proceeds of the import duty on salt are credited to "Salt," and not to "Customs." On the other hand, the "Customs" receipts include the revenue from the excise duty on cotton manufactures. When the general duties were revived in 1894, cotton goods were at first exempted, but in December 1894 a 5 per cent. *ad valorem* duty was imposed on imported cotton goods and yarns, while an excise duty at the same rate was imposed on all yarns of counts above 20 spun at power mills in British India. In February 1896 the cotton duties were revised; cotton yarns and threads, whether imported or manufactured in India, were freed from duty, while a uniform duty of 3½ per cent. *ad valorem* was imposed on all woven cotton goods imported from abroad or manufactured in India at power mills, the products of hand-looms being exempted.

---

* It may be mentioned that provision has been made in the Budget for 1913–14 for the abolition of appropriations from the land cess for provincial purposes. The proceeds of the public works cess in Bengal will now be made over to district boards, and the appropriations for rural police in Agra discontinued.

† Since the beginning of 1912 a small duty has been levied on jute exported from Calcutta, for the benefit of the Calcutta Improvement Trust (*see* page 141). A similar duty is levied also at Chittagong.

(Customs.)

Tariff Legislation.—The changes made in the Indian Customs Tariff during the decade were few, and have already been referred to. They were effected by amending Acts of 1906, 1908, 1910, and 1911, and are shown in tabular form below. For the sake of brevity, only the main classes of alcoholic liquors are shown. The rates of duty on spirits used in drugs and chemicals were also raised; spirits rendered unfit for human consumption remained dutiable at 5 per cent. *ad valorem*.

	Rates of Duty.				
	Under Tariff Acts of 1894–1896.	Act I. of 1906.	Act II. of 1908.	Act VIII. of 1910.	Act VI. of 1911.
	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.
Liquors :					
Ale, beer, and other fermented liquors, per gallon.	0 1	—	0 2	0 3	—
Liqueurs, per gallon	6 0	10 0	—	13 0	—
Spirit, perfumed, per gallon	8 0	11 0	—		
Spirit, other sorts, per proof gallon	6 0	7 0	—	9 6	—
Sparkling wines, per gallon	2 8	—	—	3 12	—
Other wines, per gallon	1 0	—	—	1 8	—
Tobacco :					
Unmanufactured, per lb.	Free	—	—	1 8	1 0
Cigars, per lb.	Five per cent. *ad valorem*.	—	—	2 8	1 10
Cigarettes, weighing less than 3 lbs. per 1,000, per thousand.				5 0	3 2
Cigarettes, weighing 3 lbs. or more per 1,000, per lb.				2 0	1 4
Manufactured, other sorts, per lb.				1 10	1 2
Silver bullion or coin, per ounce	Five per cent. *ad valorem*.	—	—	0 4	—
Petroleum, per gallon	One anna	—	—	One anna six pies.	—

The imports of intoxicating liquors in different years were shown in the Excise section of this chapter. The imports of tobacco, silver, and petroleum are dealt with in Chapter XVII. Only in the case of tobacco was the effect on the import trade of the raising of the duties very marked.

The countervailing duties on sugar were also the subject of further legislation during the period under review. Reference was made in the last decennial number of this Statement to the Acts passed in 1899 and 1902, the first of which empowered the Government of India to impose additional duties on bounty-fed imports generally, while the second, passed in view of the rise of the "cartel" system, gave them similar powers in the particular case of sugar imported from any country which, by its protective system, rendered possible the formation of trade combinations to manipulate the price of sugar.

Further Acts, passed in 1903 and 1904, made permanent the provisions of the Act of 1902, which, as passed, had force for one year only. Special duties were imposed under these Acts on sugar produced in a number of countries, but orders were issued in December 1903 remitting, subject to certain conditions, the countervailing duties chargeable on sugar produced, after August of that year, in countries which were parties to the Brussels Sugar Convention of 1902. A similar exemption was extended to Russian sugar in 1908, and the last remaining countervailing duties, on sugar from Denmark and the Argentine Republic, were withdrawn in 1912. The duties were not imposed for revenue purposes, and their yield, as will be seen from the table below, was after 1902 very small. In the three years 1899–1903 they produced £441,646.

Customs Revenue.—The table below shows, in round figures, the total customs receipts in each year, deducting only refunds and drawbacks, and leaving out of account assignments and compensations and cost of collection. Customs charges for establishment, &c., increased from £161,000 to £250,713 during the decade.

(Customs.)

	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
Sea customs, import duties on—	£	£	£	£	£	£	£	£	£	£
Arms, ammunition, &c.	10,700	8,200	10,900	10,800	11,000	13,800	10,100	10,600	10,300	9,600
Liquors	504,000	542,200	552,100	646,300	561,400	666,700	692,800	697,300	798,900	825,000
Opium	300	200	200	200	200	200	200	200	500	400
Petroleum	356,400	291,300	303,500	241,100	246,100	294,500	351,500	308,400	402,200	496,700
Silver bullion and coin.	259,000	267,100	267,700	194,700	260,600	341,700	417,100	353,800	1,077,900	644,400
Sugar (countervailing duties).	73,400	[—22,600]	700	[—70]	60	30	60	60	100	30
Sugar (ordinary duties).	164,500	193,500	214,000	259,300	284,900	295,400	340,000	367,400	411,100	306,300
Tobacco*	—	—	—	—	—	—	—	—	199,600	172,200
Articles of food and drink (excluding sugar).	93,500	100,700	117,200	124,400	129,100	160,100	168,000	162,900	167,300	179,700
Chemicals, drugs, &c.	79,500	91,000	91,500	95,400	100,100	121,400	111,600	130,400	108,100	110,200
Cotton manufactures.	634,200	653,200	803,300	877,300	850,500	998,600	778,400	816,600	935,300	1,029,900
Metals and manufactures of metals (excluding silver).	201,700	222,800	227,200	202,900	226,800	299,600	309,900	301,900	349,200	337,900
Oils (excluding petroleum).	9,300	6,100	5,900	8,100	12,000	17,200	8,300	8,000	8,200	5,800
Manufactured articles.	401,700	461,100	537,100	544,700	557,500	644,800	617,400	606,400	745,700	808,100
Raw materials and unmanufactured articles.	51,700	57,400	66,300	79,100	71,200	96,500	103,900	97,400	95,100	96,900
Export duty on rice†	823,300	780,800	859,000	751,100	681,800	664,800	535,900	680,100	851,100	885,900
Miscellaneous	19,600	21,700	22,700	21,200	24,900	23,600	19,600	23,000	22,700	26,900
Total sea customs	3,682,800	3,675,000	4,079,500	4,056,800	4,018,200	4,639,100	4,464,800	4,564,600	6,183,500	5,936,000
Land customs (including both import and export duties).	18,300	21,300	24,600	20,100	20,300	28,100	26,900	26,000	27,400	33,900
Excise duty on cotton manufactures.	121,700	135,700	155,600	178,100	190,900	223,700	223,200	264,100	281,800	320,300
Miscellaneous	19,000	18,800	19,000	17,500	17,300	19,100	14,100	15,300	18,500	19,100
Total customs revenue.	3,841,800	3,850,800	4,278,700	4,272,400	4,246,700	4,910,000	4,739,000	4,871,000	6,511,200	6,309,300

* The receipts from tobacco were not separately shown before 1910–11; the value of the total imports of manufactured tobacco rose from £275,000 in 1902–03 to £554,000 in 1909–10.

† Including trifling amounts in some years on account of export duty on pepper levied at Cochin.

The effects of the changes in the rates of duty referred to above are clearly to be traced; the immediate result of the increase in the duty on spirits in 1906, of which one month's notice was given, was a rush of imports and withdrawals from bond, at the old rates of duty, at the end of 1905–06, followed by a falling-off of imports, so that the normal effects of the increase were not seen till 1907–08.

Income Tax.

Since the abolition in 1902 of the Pandhri tax in the Central Provinces, the income tax has been the only tax brought to account under the head "Assessed Taxes." The Income Tax Act of 1886, under which the tax is levied, took the place of various local Acts under which annual licences were required for the exercise of trades and occupations. A general income tax had previously been levied for the greater part of the period between 1860 and 1873.

By the Act of 1886 all sources of non-agricultural income were taxed. They were divided into (i) salaries and pensions, (ii) profits of companies, (iii) interest on securities, and (iv) other sources. A general rate of 5 pies in the rupee (now equivalent to $6\frac{1}{4}d.$ in the £) was levied on all incomes over Rs. 2,000 (£133) a year and on the whole of the profits of companies; incomes between Rs. 500 and Rs. 2,000 derived from salaries and interest on securities were taxed at the rate of 4 pies

(Income Tax.)

in the rupee, and incomes of similar amount derived from other sources at fixed rates, approximating to 4 pies in the rupee, according to classes. Incomes below Rs. 500 were exempt from taxation, as were incomes derived from land and agriculture. By the Income Tax Act (Act XI.) of 1903 the taxable minimum of income was raised from Rs. 500 to Rs. 1,000 a year. Charities and religious endowments, and soldiers whose pay is less than Rs. 500 a month, are free from the tax, and there are some other minor exemptions.

Assessment is carried out, outside the Presidency towns, by the ordinary district staff, sometimes reinforced, as in the United Provinces, by unofficial assessors; due facilities are allowed for appeal.

In Burma the capitation tax or *thathameda*, the proceeds of which are credited under the head of land revenue, take the place in great measure of the income tax, which has been levied over the whole of Lower Burma since 1905 only. In Upper Burma the Act is still enforced, outside Mandalay Town, only in the cases of some employees of companies and of Government servants. The Pandhri tax in the Central Provinces, referred to above, was an inheritance from the Mahrattas with a long and complicated history; since 1886 it had become in effect an income tax on petty traders and manufacturers with incomes between Rs. 250 and Rs. 500 a year. It was abolished with effect from the beginning of the year 1902–03.

Revenue.—The receipts from income tax are shown below, under the main heads adopted in the Finance and Revenue Accounts, with the charges for collection and the number of assessees in each year. The tax costs little to collect, since no special establishment is, generally speaking, required.

Taxes.	1902-03.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.
Income tax :—	£	£	£	£	£	£	£	£	£	£
Ordinary collections	1,080,000	910,725	962,794	1,005,810	1,095,645	1,162,737	1,204,624	1,200,970	1,225,027	1,272,361
Deductions by Government from salaries and pensions.	285,583	234,724	240,680	248,837	260,406	270,169	279,812	287,749	294,090	361,742
Deductions from interest on Government securities.	51,189	52,024	52,248	54,106	55,689	57,851	60,195	59,336	59,706	59,925
Recoveries from surplus profits of railway companies	8,194	8,172	9,526	8,255	7,219	8,761	4,489	6,226	9,605	12,896
Miscellaneous	5,502	4,200	3,977	4,385	4,828	4,595	4,299	4,683	4,873	5,955
Pandhari tax in Central Provinces.	24	—	—	—	—	—	—	—	—	—
Total	1,403,492	1,206,845	1,269,225	1,321,393	1,423,787	1,504,113	1,553,419	1,558,964	1,593,301	1,652,878
Refunds	7,756	8,029	6,704	6,715	7,460	8,260	8,843	12,758	9,618	10,827
Net receipts	1,395,736	1,198,816	1,262,521	1,314,678	1,416,327	1,495,853	1,544,576	1,546,206	1,583,683	1,642,052
Charges for collection	24,056	22,814	21,008	22,518	23,828	24,577	25,568	26,126	26,991	28,278
Number of assessees	527,397	237,523	242,426	248,851	254,996	260,039	266,836	274,096	283,247	

It is noticeable that the exemption in 1903 of incomes between Rs. 500 and Rs. 1,000, while it reduced the number of assessees by more than a half, had only a comparatively slight effect on the total revenue. The gross receipts for the first and last of the ten years are shown by provinces in the margin. For the purpose of comparison with 1911–12, the year 1903–04 is a better starting point, and the figures for that year have therefore been added. It will be seen that the receipts were reduced in very different proportions in different provinces by the change introduced in 1903. The largest proportionate increase in receipts during the decade was in Burma. The increase was partly due to the extension of the area of assessment, but,

—	1902-03.	1903-04.	1911-12.
	£	£	£
Bengal	395,875	335,766	371,718
E. Bengal and Assam	21,276*	17,052*	89,167
United Provinces	176,287	138,456	161,044
Punjab	107,335	86,800	108,124
N.W. Frontier Province	7,662	6,729	9,570
Central Provinces and Berar	25,854	22,363	47,043
Burma	83,188	81,606	129,336
Madras	209,325	172,182	213,775
Bombay	273,212	253,925	362,031
India, General	103,478	91,966	161,070
Total	1,403,492	1,206,845	1,652,878

* Assam only.

as will be seen from the figures given below, Rangoon accounted for a large share; the growth of revenue was most marked under the head "Profits of Companies." Receipts increased considerably also in Bombay and Bengal (taking into account in the latter case the reduction of area effected in 1905). In each case the growth of revenue in the Presidency town was the main factor. As the figures of collections in the margin show, Calcutta and Bombay contribute a substantial proportion of the total receipts from income tax in India. In the remaining provinces, where large incomes of the classes subject to income tax are fewer, the growth of revenue after 1903 hardly made good the loss resulting from the measure of exemption that came into force in that year. The difference between the earlier and later figures for the Central Provinces and Berar is mainly due to the fact that the Income Tax Act was not applied to Berar until the 1st April 1904.

—	1902–03.	1903–04.	1911–12.
	£	£	£
Calcutta -	193,268	179,633	236,109
Bombay -	144,838	143,536	241,419
Madras -	35,862	34,372	48,423
Rangoon -	40,841	44,654	72,516

Incomes assessed.—The total number of persons assessed to income tax in India was very small, in proportion to the population, before 1903, and has since been much smaller. The number of assessees, excluding companies, in 1902–03 was about 526,000, or less than 23 in 10,000 of the total population; in 1910–11, the latest year for which complete figures are available, the number was about 270,000, or 11 in 10,000. The number of assessees, and the receipts, under each part of the schedule to the Act are shown in the margin.

—	1902–03.		1910–11.	
	Assessees.	Collections.	Assessees.	Collections.
		£		£
Part I.—Salaries and pensions -	144,045	403,376	84,962	427,316
Part II.—Profits of companies -	4,657	103,529	7,952	167,330
Part III.—Interest on securities -	—	63,799	—	79,030
Part IV.—Other sources of income	382,098	829,605	184,908	856,935
Total - - -	530,800	1,400,309	277,822	1,530,611

Note.—These figures, being compiled from the provincial administration reports, differ slightly from those given in the tables above.

A classification of the incomes assessed according to their amount shows that nearly two-thirds of them are still below Rs. 2,000 (£133) a year, but that the proportion of higher incomes tends to increase. Incomes above Rs. 2,000 yield about four-fifths of the total revenue. It may be remarked, with reference to the figures in the margin, that the number of incomes assessed as between Rs. 1,000 and Rs. 1,250 rose greatly in 1903–04, so that the total number between Rs. 1,000 and Rs. 2,000 had increased by 1905–06 to over 164,000. The number of incomes (including "profits of companies") in the highest class—over one lakh (£6,667) a year—increased from 239 in 1902–03 to 363 in 1910–11.

Total Number of Incomes assessed.*	1902–03.	1910–11.
Rs. 500, but less than Rs. 1,000 -	324,044	—
Rs. 1,000, but less than Rs. 2,000	128,661	180,892
Rs. 2,000 and over - - -	75,817	95,647

* Excluding a small number of incomes as to which full details are not available.

Of the incomes assessed under Part I.—Salaries and Pensions—about half are paid by Government, and these include the great bulk of the highest salaries. The returns of 1910–11 show 34 salaries of over £2,000 a year paid otherwise than by Government. Under Part II. cotton spinning and weaving, banking, mining, railway, and jute spinning and weaving companies make the largest contributions. Under Part IV. bankers and money-lenders constitute more than a third of the present total number of assessees, and contribute in almost as large a proportion to the receipts.

(Registration.)

	Assessees per 100,000 of Population, Parts I. and IV.			
	1901-02.		1911-12.	
	Incomes below Rs. 2,000.	Incomes above Rs. 2,000.	Incomes below Rs. 2,000.	Incomes above Rs. 2,000.
Bengal	149	23	73	42
Bihar and Orissa	—	—	*Figures not available.*	
Assam	113	29	41	37
United Provinces	133	24	49	25
Punjab	212	28	98	40
N.W. Frontier Province	153	17	70	31
Central Provinces and Berar.	76*	13*	56	26
Burma	225	44	127	68
Madras	199	25	66	34
Bombay	394	69	164	99

* Central Provinces only.

1911-12 were about 1,700 and 2,400 respectively. The increase in the relative number of larger incomes is again shown.

Commerce and trade account altogether for three-quarters, or more, of the assessees, and of the receipts, under Part IV. The professions provide about 13,000 assessees, about two-thirds of whom are attorneys or pleaders.

Finally, the number of assessees relatively to the total population may be shown by provinces. The figures are approximate, and companies are omitted. The proportion of assessees in the large towns is of course much higher: in Calcutta and Bombay the numbers per 100,000 of population in

Registration.

Registration Law.—The provisions of the general Indian law relating to the registration of documents, which were formerly scattered over a number of enactments, were consolidated by the Indian Registration Act (No. XVI.) of 1908, which, however, made no substantial change in the law. The Act extends to the whole of British India, but provision is made for the exclusion of districts from its operation by the local governments, and Upper Burma, which has a Registration Regulation of its own, has been so excluded. Under the Act registration is compulsory in the case of certain classes of documents, among which are instruments of gift of immoveable property, other non-testamentary instruments affecting rights of the value of Rs. 100 or upwards in such property, and (subject to a limited possibility of exemption) leases for more than one year. Registration is optional, so far as this Act is concerned, in the case of instruments relating to rights in immoveable property of a value below Rs. 100, leases for not more than a year, instruments relating to rights in moveable property, wills, and other documents. Inspectors-General of registration are appointed in the different provinces, which are divided into districts and sub-districts, with registrars and sub-registrars. The district officer—collector or deputy-commissioner—is usually registrar *ex officio*. Fees are charged for registration, for searching the records, for making copies, &c.

As regards transfers of property, further provision as to registration is made by the Transfer of Property Act, 1882. This Act, as it stood up to 1904, required all transfers by sale or mortgage of immoveable property to be registered, except that in the case of tangible immoveable property of value below Rs. 100 transfer might alternatively be effected by delivery of the property, and the registration of mortgage deeds of value not exceeding Rs. 100 was not compulsory. The Act was amended in 1904, the registration of simple mortgages of lower value than Rs. 100 being made compulsory; by the same amending Act the registration of short-term leases was as a general rule made compulsory, except where delivery of possession accompanies the agreement. In the latter case some provision was made for relaxation of the rule, but it may be said

that, where the Transfer of Property Act is in force, nearly all instruments transferring immoveable property have now to be registered.

The Act did not, as passed, extend to Bombay, the Punjab, or Burma ; but so far as the sections here in question are concerned it has been applied to the greater part of Bombay and Lower Burma. The application of these sections was extended to Lower Burma in 1904, and to Sind in 1907. In Bombay generally the Act has been in force since 1893. The Act was extended also to Berar in 1907.

A special registration system, of which some account was given in the last decennial number of this Statement, was until recently in operation, under the provisions of the Dekkhan Agriculturists' Relief Act of 1879, in four districts to which that Act was applied. The distinguishing feature was the appointment of village registrars to register relatively small transactions. These registrations, which averaged in number about 100,000 a year and in value rather less than £4, are not included in the figures given below. The village registration system was discontinued, as an experimental measure, from the 1st April 1911, after which date the whole of the registration work of the districts in question was dealt with by the ordinary sub-registrars, working under the Registration Act. Nearly all the documents that used to be dealt with by the village registrars thus ceased to be compulsorily and became optionally registrable. The public at once ceased to register them, and no inconvenience is reported to have resulted.

Statistics of Registration.—The statistics of registration are of some interest as an index to the fluctuations of transactions in real property. The total figures for British India may first be given in summary form :—

Year.	Number of Registration Offices.	Number of Registrations.					Aggregate Value of Property transferred by Registered Documents, excluding Wills.		
		Immoveable Property.			Moveable Property.	Total.	Affecting Immoveable Property.	Affecting Moveable Property.	Total.
		Compulsory.	Optional.	Total.					
							£	£	£
1902	2,079	2,096,067	618,396	2,714,463	275,833	2,990,296	45,690,565	3,780,557	49,471,122
1903	2,080	2,092,027	609,521	2,701,548	273,169	2,974,717	47,253,435	3,822,046	51,075,481
1904	2,088	2,314,589	460,798	2,775,387	284,569	3,059,956	52,484,572	4,178,379	56,662,951
1905	2,106	2,737,978	159,380	2,897,358	286,752	3,184,110	54,246,872	4,192,334	58,439,206
1906	2,116	3,043,579	164,868	3,208,447	304,401	3,512,848	59,954,876	4,437,796	64,392,672
1907	2,123	3,196,738	170,748	3,367,486	308,366	3,675,852	64,177,400	4,620,169	68,797,569
1908	2,147	3,383,316	184,551	3,567,867	314,152	3,882,019	68,890,945	4,779,882	73,670,827
1909	2,180	3,467,712	191,299	3,659,011	301,105	3,960,116	70,042,580	4,802,030	74,844,610
1910	2,199	3,284,198	184,728	3,468,926	292,967	3,761,893	70,913,459	4,998,328	75,911,787
1911	2,211	3,334,683	181,231	3,515,914	293,295	3,809,209	71,550,932	5,399,946	76,950,878

The table shows a steady general increase. The only points that call for special comment are the marked increase between 1903 and 1906 in the number of compulsory registrations relating to immoveable property, and the simultaneous decrease in optional registrations. These movements are in the main attributable to the Act of 1904, referred to above, making compulsory the registration of mortgages of a lower value than Rs. 100.

As the table shows, the most important class of registrations, by far, is that of compulsory registrations affecting immoveable property, and something like three-quarters of the registrations under this head are accounted for by instruments of mortgage and instruments of sale or exchange. Leases account for most of the remainder. The figures of mortgages and sales indicate to some extent the need of agriculturists for capital and the degree to which it is obtainable ; generally speaking, a bad harvest causes a rise in the number of mortgages and sales. But a rise may, on the other hand, be caused by the development of new lands, the growth of towns, or an expansion of trade or industrial activity. It may be of interest to show in percentage form the variations in the numbers of mortgages and sales of immoveable property compulsorily registered year by year in the larger provinces.

(Registration.)

	Variation : Figures for 1902 = 100.									Actual Figures, 1911.		
	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	Number.	Value.	Number per 10,000 of Population.
											£	
Bengal*	95	96	141	171	178	221	217	178	175	282,336	4,494,900	53
	99	99	63	74	73	79	81	71	73	289,892	5,034,996	55
E. Bengal and Assam.	112	180	100†	120	140	146	155	147	151	270,461	2,720,168	79
	99	96	100	113	110	114	113	121	124	244,935	2,600,473	72
United Provinces	104	107	164	188	204	232	238	218	194	99,510	3,238,651	21
	98	101	108	121	125	131	153	145	134	59,861	2,746,086	13
Punjab	113	118	115	148	125	154	173	154	143	37,020	1,750,100	18
	104	112	116	129	115	128	138	123	123	25,129	1,585,703	12
N.W. Frontier Province.	106	87	67	78	81	95	97	86	92	3,775	172,765	17
	104	96	90	105	113	125	129	113	125	3,864	186,694	18
Central Provinces and Berar.	101	114	120	128	152	199	225	205	180	25,627	842,781	18
	92	99	98	102	102	121	154	144	144	29,724	1,072,449	21
Burma	112	124	145	155	123	109	107	113	132	23,208	1,540,887	19
	123	136	145	170	180	196	187	215	236	27,381	2,173,460	23
Madras	102	173	213	228	238	246	252	246	250	528,987	8,680,016	127
	102	107	114	124	134	138	139	131	133	232,188	8,060,291	104
Bombay	92	94	119	98	109	117	128	141	148	67,935	2,528,762	34
	104	116	120	144	153	152	170	169	176	114,242	4,525,992	58
Total, British India.	100	131	201	225	238	262	269	251	250	1,341,651	26,015,873	55
	101	104	110	124	127	134	137	131	134	1,229,143	28,071,197	50

* The upper figures in each case represent the number of instruments of mortgage ; the lower the number of instruments of sale and exchange.

† The figures up to 1904, for Assam alone, are comparatively small. The figures for 1905 are therefore taken as a fresh starting point.

The explanations given of the fluctuations in the figures vary greatly in different localities, an increase being attributed sometimes to favourable and sometimes to unfavourable circumstances. Perhaps the only comment that can safely be made on figures based on provincial totals is that the effects of the alterations and extensions of the Transfer of Property Act referred to above are in most cases clearly to be traced. It was reported that the full effect of the Act of 1904 was not at once evident, as its meaning and requirements were at first not fully understood. The increase in the number of mortgages registered after the passing of this Act illustrates the fact that in a very large proportion of the transactions registered the property in question is of trifling value. This is the case also with sales : nearly a half of the total number of sales at the present time are of property of value less than Rs. 100 (£6 13*s.* 4*d.*) and the proportion in the earlier years of the decade was rather more than a half.

The figures for Madras show to what an enormous extent the people of South India make use of bonds and deeds. The total number of documents registered in that province represents approximately one transaction to every six families.

The explanations given of the differences between the figures of 1911 and those of 1910 are of no special interest.

Receipts and Charges.—The fees for registration vary in different provinces. The receipts and charges in 1911–12 are shown below :—

	India, General.	Central Provinces and Berar.	Burma.	Eastern Bengal and Assam.	Bengal.	United Provinces.	Punjab.	N.W. Frontier Province.	Madras.	Bombay.	Total.
	£	£	£	£	£	£	£	£	£	£	£
Fees for registering documents	1,499	20,503	13,180	65,970	79,680	32,335	15,630	2,061	116,336	47,603	394,796
Fees for copies of registered documents.	234	863	44	2,222	2,642	1,830	4,058	432	3,249	1,265	16,839
Miscellaneous	48	1,931	276	2,385	4,226	5,492	1,376	219	17,596	677	34,228
Total receipts	1,781	23,297	13,500	70,577	86,548	39,657	21,065	2,712	137,181	49,545	445,862
Deduct refunds	—	*14*	*1*	*356*	*147*	*31*	*24*	—	*375*	*175*	*1,124*
Net receipts	1,781	23,282	13,499	70,221	86,401	39,626	21,041	2,712	136,806	49,370	444,739
Superintendence charges	—	1,187	—	1,961	3,586	1,112	—	—	3,564	1,617	13,026
District charges	653	7,351	6,536	39,921	50,214	18,435	7,993	704	79,693	23,729	235,229
Total charges	653	8,538	6,536	41,881	53,800	19,543	7,993	704	83,257	25,346	248,255

CHAPTER XIII.

AGRICULTURE.

Agriculture gives occupation, directly and indirectly, to the great majority of the population of India. Taking the census figures for 1901, the latest complete figures at present available, 196 million persons out of a total population of 294 millions (including Native States) were shown as depending directly upon agriculture proper and cattle-rearing. Details are given in the margin. Many persons also combine agriculture, as a subsidiary pursuit, with some other occupation. It has been estimated that nine-tenths of the rural population are so closely connected with the land that they may properly be called agricultural.

Provision and care of Animals:—	
Stock-breeding and dealing	3,905,000
Training and care of animals	72,000
Total	3,977,000
Agriculture:—	
Landholders and tenants	152,684,000
Agricultural labourers	35,409,000
Growers of special products	2,629,000
Agricultural training and supervision	970,000
Total	191,692,000
Grand Total	195,668,000

A general view of the agricultural conditions in British India is given by the table below, which compares the figures for the agricultural years closing with the harvesting of the spring crops in 1902 and 1912. The statistics for 1912 cover practically the whole of British India, except Baluchistan and the Shan States; those for 1902 are less complete. The returns are still based to a considerable extent on estimates, and the figures are to be regarded as approximations only.

—	1901–02.	1911–12.	Percentage of gross cropped Area under principal Crops.					
	Thousands of Acres.	Thousands of Acres.	—	1901–02.	1911–12.	—	1901–02.	1911–12.
Area for which agricultural statistics are available	553,707	616,121	Rice	30·8	30·8	Linseed	·9	1·5
			Wheat	8·2	10·1	Sesamum	1·6	1·7
Not available for cultivation:—			Barley	2·7	3·4	Rape and mustard	1·3	1·7
Forests	66,364	80,851	Jawar	9·6	7·4	Other oil-seeds	1·3	1·7
Other areas	137,941	149,605	Bajra	5·8	5·3			
			Ragi	1·6	1·7			
Balance available for cultivation:—			Maize	2·7	2·2	Total, oil-seeds	5·2	6·6
			Gram	4·3	5·7			
Uncultivated	107,547	114,700	Other grains and pulse	12·0	11·8	Cotton	4·5	5·9
Fallow	42,147	54,982				Jute	1·0	1·2
Actually cropped	199,708	215,982				Other fibres	·25	·28
			Total, food-grains.	77·8	78·4			
Area cropped more than once	27,635	33,020				Indigo	·35	·11
						Opium	·27	·09
Area irrigated	32,582	40,679	Sugar	1·1	1·0	Tobacco	·42	·40
			Coffee	·05	·04			
			Tea	·22	·22	Fodder crops	1·3	2·0

The chief points of interest will be noticed in connection with the more detailed figures given below. Meanwhile it may be noted, firstly, that, taking India as a whole, there is still plenty of land available for the rural population, though it is not to be assumed that the whole of the land shown as available for cultivation, but uncultivated (generally described as "cultivable waste"), could be cultivated profitably under existing conditions; and, secondly, that there was during the decade no very marked change in the order of importance of the different crops. The areas under the various crops fluctuate considerably from year to year. The figures for wheat, barley, oilseeds, and cotton have shown substantial increases in recent years, while those for indigo and opium, on a smaller scale, have shown a more marked decline.

Throughout India the soils, the seasons, the local conditions, and agricultural practices vary in an extraordinary degree, and crops are normally sown and harvested in various parts in every month of the year. The cultivation of the staple crops in different districts is to some extent determined by the character of the soil, but to a greater extent by rainfall and other climatic conditions. There are two main harvests —the *kharif* (autumn), consisting of crops sown at the beginning of the south-west monsoon in June and July and reaped between September and December, and the

(Agriculture.)

rabi (spring), consisting of crops sown usually in October and November to ripen in March and April. The difference in character between *kharif* and *rabi* crops is most marked where, as in Northern India, there are great seasonal variations in temperature. In Madras, where the climate is marked by more regular and continuous warmth, the distinctions to a large extent disappear, and there are only early and late sowings of the same crops. Agriculture is for the most part in the hands of small men, and farming on a large scale is quite exceptional. In the *ryotwari* areas of Madras, for example, the average size of a holding does not exceed eight cultivated acres, while in the more thickly populated areas of Bihar, under the *zamindari* system, the tenant's holding averages less than half an acre. Generally speaking, the inherited experience of generations enables the ryots to cultivate their small holdings very skilfully, though farming is much more advanced in some parts than in others. Tillage instruments are generally few, simple in construction, and indigenous in pattern. A great obstacle to the improvement of Indian agriculture is the general deficiency in the available supply of manures.

Irrigation.—In a country throughout the greater part of which the rainfall is insufficient, precarious, or unevenly distributed, one of the most important factors in the development and maintenance of agriculture is irrigation. Without artificial irrigation large areas in India would lie permanently waste, or could be cultivated only in years of exceptionally favourable rainfall, and the security of the harvest may be said to depend to some extent on the existence of some form of irrigation in almost all parts, except in tracts such as Eastern Bengal, Assam, and Lower Burma, where the average annual rainfall does not fall short of 70 inches. The simpler methods of irrigation have long been practised, and some works were constructed by former rulers of the country; but it was not until after the establishment of British rule that the larger and more important works, many of which irrigate annually hundreds of thousands of acres, were undertaken.

Irrigation works may be conveniently divided into three great classes, namely lift, storage, and river works, which are represented respectively by wells, tanks and reservoirs, and canals. Works of the different classes may be, and frequently are, combined in various ways.

Pure lift irrigation works, taken separately, are necessarily of a petty character, and cannot conveniently be owned or maintained by the State. Private enterprise in the matter of well-construction is encouraged by agricultural loans and by liberal rules as regards land-revenue assessment. In the aggregate, the works of this class are of great importance.

Tanks or storage-works are of all sizes, ranging from the great lakes formed by the construction of high dams across the beds of large but irregularly flowing rivers to the small village tanks to be found throughout Southern India, many of which irrigate less than 10 acres. Although many large storage-works have been constructed by the British Government, tank-irrigation is essentially a product of native rule, and the tank-irrigated area depends largely on old native works, the maintenance of which is now undertaken in whole or in part by the State. The smaller forms of tanks, like the wells, are constructed and maintained by private enterprise; the supply to many of the works is very precarious and apt to fail in years of extreme drought.

The third and most important class of irrigation works—the river-works or canals—are generally of such magnitude, and affect so many different interests, that they can only be constructed and efficiently maintained by the State, though a certain number of petty works represent the results of private enterprise. The great canals constructed and maintained by the State may be divided into perennial and inundation canals. The bulk of the canals are of the first class; the inundation canals receive water only during the flood season, and are to be found mostly in the Indus valley.

The State irrigation works are dealt with in detail in Chapter XIX.

Canal Colonies.—Reference may appropriately be made here to the canal colonies, which may be said to represent the extreme case of improvement in agricultural conditions effected by irrigation. In the Punjab uplands now watered by the Lower Chenab and Lower Jhelum Canals, irrigation has completely altered the face of the country, so that it supports in unparalleled prosperity a population numbering a hundred to every one of its former poverty-stricken denizens, while land once refused

as a gift sells with ease at £15 an acre. The largest of the canal colonies, the Chenab Colony, on the Lower Chenab Canal, lies in the Rechna Doab, between the Chenab and Ravi rivers, and has a total area of some 3,900 square miles. This great area was until 1892 sparsely inhabited by nomad pastoral tribes, whose total numbers were estimated at less than 70,000. Cultivation was rendered possible only by the construction of the Chenab Canal. As fast as the canal and its distributaries were constructed, the land (which was waste land owned by Government) was allotted to various classes of grantees, the bulk of the grants being made to immigrant peasants, including men from the best agricultural districts in the province. Since its foundation the colony has enjoyed remarkable prosperity. The nomads to whom a large proportion of the land was allotted, though without any previous knowledge of agriculture, assimilated the practices of their new neighbours with extraordinary success, and the whole colony is now as well cultivated as almost any part of India. The work of colonisation began in 1892; by 1901 the population had increased to over 791,000, and at the end of 1901–02 some 2,470 square miles out of a total allotable area of about 2,660 square miles had been allotted. In September 1912 the allotable area was returned at 3,040 square miles, and the area actually allotted at 2,870 square miles, while the total population had risen to over 1,111,000. The export of wheat from the Lyallpur district in the last year of the decade reached the total of 150,000 tons.

The Jhelum Canal Colony, on the Lower Jhelum Canal, occupies some 900 square miles of State land in the Shahpur district, and is a more recent development. Colonisation began in 1902, and was conducted on lines similar to those adopted in the Chenab Colony, but a large proportion of the grants were made on the condition that a suitable mare should be maintained for breeding purposes. Between 1906, when an informal census was taken, and 1911 the population of the colony proper increased from 73,734 to 161,806. Up to September 1912 some 630 square miles had been allotted out of an allotable area of about 780 square miles.

The Chunian Colony, a much smaller colony on the Bari Doab Canal in the Lahore district, dating from 1897, was returned in 1912 as having a total allotable area of less than 130 square miles, of which practically the whole had been allotted. The population was 16,458 in 1901 and 43,494 in 1911.

Other older canal colonies in the Punjab, such as the Sohag-Para Colony in the Montgomery district, and the Sidhnai Colony in the Mooltan district, had by the beginning of the period under review reached their full development and become merged in the surrounding districts. Before the end of the decade colonisation in the newer colonies also had been practically completed, and their administration had been almost completely assimilated to that of ordinary districts.

Colonisation has also been carried out on a considerable scale since 1901 on the Jamrao, Nasrat, and Dad canals in Sind.

Schemes for colonisation on the canals included in the Punjab Triple Canal Project are being prepared.

A concession of some importance was made to peasant colonists in the Punjab in 1910, when it was decided to allow them to purchase proprietary rights, on very favourable terms, in all colonies except the Jhelum Colony. The concession was made possible by the passing of the Alienation of Land Act, which secures in another way the result that the former restriction of the peasant's right to an inalienable right of occupancy was intended to achieve.

Before proceeding to a more detailed consideration of the principal crops, two further tables (*see* below) may be given to illustrate the distribution by provinces of cultivable and cultivated lands, and of the means of irrigation, at the beginning and end of the period under review.

Variations in the figures are, apart from the inclusion of new data, to some extent due to revisions of classification and statistical improvements, but the first table bears some evidence of an expansion of cultivation, as, for example, in Lower Burma and the Punjab.

The net areas cropped are shown again in the second table, with a view to showing the extent to which cultivation is dependent upon irrigation in the various provinces. The figures for 1901–02 are, owing to the changes in the statistical returns

(Agriculture.)

Figures in Thousands of Acres, omitting 000.

	Area for which Statistics are available.		Forests.		Other Areas not available for cultivation.		Cultivable Waste.		Current Fallows.		Net Area cropped.	
	1901-02.	1911-12.	1901-02.	1911-12.	1901-02.	1911-12.	1901-02.	1911-12.	1901-02.	1911-12.	1901-02.	1911-12.
Upper Burma	50,494	53,805	5,771	11,864	29,982	21,720	8,677	11,163	2,012	4,438	4,053	4,620
Lower Burma	53,476	54,994	5,410	7,101	24,806	23,613	15,494	14,816	392	744	7,373	8,720
Assam	18,289	31,306	2,310	2,331	1,172	5,510	8,892	15,222	1,310	2,530	4,605	5,712
Bengal	97,550	49,646	5,223	4,080	22,759	10,837	12,267	5,068	7,945	4,730	49,357	24,931
Bihar and Orissa	—	53,173	—	3,428	—	11,151	—	7,422	—	3,616	—	27,556
Agra	51,117	52,800	8,679	8,718	6,481	7,657	8,211	7,441	1,911	2,593	25,834	26,391
Oudh	15,499	15,476	598	613	2,279	2,241	3,086	2,758	421	664	9,115	9,200
Ajmer-Merwara	939	1,771	89	91	350	870	108	15	93	575	299	220
Pargana Manpur*	39	31	20	16	1	1	10	7	1	—	6	7
Punjab	57,382	61,255	3,522	3,333	8,400	12,531	18,698	17,295	5,260	5,839	21,509	22,257
N.W. Frontier Province	8,436	8,574	350	374	3,210	2,269	2,235	2,723	1,059	564	1,581	2,285
Sind	30,065	30,257	759	791	14,586	14,686	6,672	5,906	4,666	5,934	3,380	2,941
Bombay	43,579	48,629	7,186	7,586	5,000	5,959	1,439	1,543	7,162	10,636	22,791	22,906
Central Provinces	50,271	52,946	10,967	15,096	4,462	4,091	15,131	13,561	3,250	2,229	16,461	17,969
Berar	11,356	11,372	2,442	2,273	810	866	238	367	845	809	7,020	7,057
Madras	64,202	89,073	12,633	12,798	13,297	24,900	6,372	9,371	5,744	8,935	26,155	33,068
Coorg	1,012	1,012	405	358	345	345	22	22	72	146	168	141
Total	553,707	616,121	66,364	80,851	137,941	149,605	107,547	114,700	42,147	54,982	199,708	215,982

* An isolated British *pargana* in Central India.

Figures in Thousands of Acres, omitting 000.

	1901-02.						1911-12.					
	Area irrigated from				Net Area irrigated, including other Sources.	Net Area cropped.	Area irrigated from				Net Area irrigated, including other Sources.	Net Area cropped.
	Government Canals.	Private Canals.	Tanks.	Wells.			Government Canals.	Private Canals.	Tanks.	Wells.		
Upper Burma	168	280	150	10	690	4,053	420	204	136	8	849	4,620
Lower Burma	—	5	1	1	52	7,373	—	22	4	2	107	8,720
Assam	—	—	—	—	—	4,605	1	119	—	—	317	5,712
Bengal	878	—	—	—	878	49,357	111	244	728	21	1,670	24,931
Bihar and Orissa	—	—	—	—	—	—	798	334	629	626	3,845	27,556
Agra	2,120	3	1,048	4,157	7,769	25,834	1,971	21	49	2,975	6,324	26,391
Oudh	—	—	951	1,507	2,522	9,115	—	—	—	900	1,613	9,200
Ajmer-Merwara	—	—	17	42	59	299	—	—	25	91	116	220
Punjab	4,531	411	31	3,747	8,851	21,509	6,964	420	7	3,420	10,955	22,257
N.W. Frontier Province	185	379	1	82	670	1,581	221	439	—	89	847	2,285
Sind	1,930	793	—	19	2,937	3,380	2,637	67	—	47	2,885	2,941
Bombay	119	6	91	466	773	22,791	147	16	58	696	1,005	22,906
Central Provinces	—	—	625	88	746	16,461	13	2	428	59	524	17,969
Berar	—	—	—	49	49	7,020	—	—	—	32	33	7,057
Madras	2,922	86	2,165	1,205	6,585	26,155	3,535	180	3,299	1,442	9,587	33,068
Coorg	1	—	—	—	1	168	3	—	2	—	4	141
Total	12,855	1,963	5,080	11,374	32,582	199,708	16,821	2,068	5,364	10,408	40,679	215,982

Note.—Areas of less than 500 acres are not shown. There are, for example, small areas irrigated by Government canals in Lower Burma.

referred to above, not closely comparable with those for 1911–12. The earlier figures for Bengal in particular are noticeably incomplete. The returns show the actual area irrigated in each year, which depends to a great extent on the character of the season, but the total figures show a steady upward tendency, attributable in great part to the extension of the Government irrigation works, of which an account is given in the chapter on Public Works. The extremes as regards dependence upon irrigation are to be found in Sind, which stands apart from all other provinces in this respect, and Eastern Bengal, where the part played by irrigation is insignificant.

Principal Crops.

The following tables show the distribution of the areas under the most important crops in 1911–12. As has already been indicated, the total area cropped is greater than the area of cultivated land, owing to double cropping. The extent to which the practice prevails in different provinces is shown by the figures at the end of the third table.

TERRITORIAL DISTRIBUTION OF THE PRINCIPAL CROPS IN 1911–12.

Figures in Thousands of Acres; omitting 000.

I.

	Rice.	Wheat.	Barley.	Millets.			Maize.	Gram (Pulse).	Other Food-grains and Pulses.	Total. Food-grains and Pulses.
				Cholum or *Jawar.*	*Cumbu* or *Bajra.*	*Ragi* or *Marua.*				
Upper Burma	1,958	27	—	485	318	—	161	39	466	3,455
Lower Burma	7,937	—	—	—	1	—	21	1	27	7,987
Assam	41,616	—	1	—	—	2	19	1	87	4,727
Bengal	20,961	143	95	2	6	15	95	177	1,417	22,910
Bihar and Orissa	17,365	1,285	1,340	95	67	1,009	1,661	992	4,537	28,352
Agra	3,430	5,641	3,977	1,366	2,245	153	998	5,175	4,407	27,393
Oudh	1,844	1,995	1,238	266	636	39	796	1,697	2,448	10,959
Punjab	514	9,725	1,339	554	1,155	17	955	4,100	1,019	19,379
North-West Frontier Province	47	1,199	296	53	76	—	410	174	99	2,355
Sind	1,089	368	19	389	415	1	2	76	232	2,591
Bombay	1,682	984	38	6,064	4,664	582	165	422	2,763	17,364
Central Provinces	4,780	3,291	23	1,667	42	24	142	993	4,349	15,312
Berar	41	320	—	2,247	75	—	2	117	617	3,419
Madras	10,289	18	3	5,166	3,384	2,448	118	135	7,024	28,586
Coorg, Ajmer-Merwara, and Manpur	83	28	63	30	11	6	44	28	15	310
Total	76,637	25,025	8,433	18,386	13,093	4,296	5,591	14,129	29,507	195,097

II.

	Oilseeds.	Condiments and Spices.	Sugar-cane.	Fibres.			Indigo.	Coffee.	Tea.	Opium.
				Cotton.	Jute.	Other Fibres.				
Upper Burma	1,150	54	3	172	—	—	—	—	2	—
Lower Burma	68	21	11	20	—	—	—	—	—	—
Assam	301	3	37	38	95	—	—	—	354	—
Bengal	1,888	157	223	54	2,738	39	1	—	146	—
Bihar and Orissa	2,050	82	263	89	258	20	110	—	2	3
Agra	1,190	106	1,120	842	—	77	24	—	8	104
Oudh	337	24	221	60	—	18	6	—	—	111
Punjab	1,599	32	298	1,462	—	23	39	—	10	2
North-West Frontier Province	105	5	32	56	—	1	—	—	—	—
Sind	240	5	4	336	—	1	5	—	—	—
Bombay	1,357	204	67	4,107	—	120	—	—	—	—
Central Provinces	2,981	58	23	1,392	—	65	—	—	—	—
Berar	296	25	1	3,256	—	44	—	—	—	—
Madras	2,927	721	108	2,676	—	280	90	51	21	—
Coorg, Ajmer-Merwara, and Manpur	5	4	1	28	—	—	—	43	—	—
Total	16,495	1,503	2,410	14,568	3,091	689	275	95	544	220

III.

	Tobacco.	Cinchona.	Fodder Crops.	Orchards and Garden Produce.	Other Crops.		Total area cropped during the Year.	Area cropped more than once.	Net Area cropped during the Year.
					Food.	Non-food.			
Upper Burma	30	—	49	34	64	4	5,017	397	4,620
Lower Burma	59	—	3	403	27	115	8,726	6	8,720
Assam	8	—	6	372	37	62	6,168	456	5,712
Bengal	306	1	98	944	511	440	30,437	5,506	24,931
Bihar and Orissa	116	—	31	655	510	413	32,956	5,399	27,556
Agra	66	—	993	267	166	54	32,761	6,370	26,391
Oudh	18	—	117	94	61	4	12,030	2,830	9,200
Punjab	76	—	2,896	164	308	19	26,308	4,051	22,257
North-West Frontier Province	12	—	75	5	39	4	2,689	404	2,285
Sind	10	—	9	43	—	20	3,263	322	2,941
Bombay	68	—	71	137	—	3	23,499	593	22,906
Central Provinces	18	—	355	86	4	1	20,295	2,326	17,969
Berar	8	—	—	13	6	1	7,070	12	7,057
Madras	192	2	273	1,173	90	188	37,380	4,312	33,068
Coorg, Ajmer-Merwara and Manpur	—	—	2	5	4	1	403	35	369
Total	999	4	4,978	4,396	1,839	1,329	249 002	33,020	215,982

(Principal Crops.)

Rice.—Rice is the staple food of a great portion of the people of India, and the staple crop in areas of heavy and assured rainfall; good crops are also produced in other parts with the aid of irrigation. Every province shows some area under rice, but Bengal (including Bihar and Orissa) accounts for about half of the total area, and Madras, Burma, and the United Provinces for the greater part of the remainder. The areas sown and the estimated yield, in 1911–12, in the parts of the country covered by the crop forecasts issued by the Government of India, are shown in the margin. These figures represent something like three-quarters of the total rice area of British India. The season of 1911–12 was fairly favourable, and the estimated yield above the average of recent years, though less than that for the two preceding years, which reached nearly 28 million tons. In 1907–08, on the other hand, the yield fell to 19 million tons, a very unfavourable season in Bengal reducing the contribution of that province to 7 million tons. Rice is exported in very large quantities, mainly from Burma, where it is grown principally for export; in the other rice-growing tracts it is grown mostly for local consumption. The total exports during the decade varied between 1,513,000 tons in 1908–9 and 2,624,000 tons in 1911–12.

	Area sown, in Thousands of Acres.	Estimated Yield of Cleaned Rice, in Thousands of Tons.
Bengal	24,969	12,570
Eastern Bengal and Assam	16,985	7,667
Madras	7,151	2,896
Lower Burma	7,338	2,966
Total	56,443	26,100

Wheat.—Wheat is grown in India in the cold weather, most extensively in the north, and hardly at all in the south, the Punjab, United Provinces, and Central Provinces being the most important centres of cultivation. There are also large areas under wheat in some of the native states, particularly in Central India; these are taken into account in the estimates for 1911–12 quoted in the margin, which may be taken to cover practically the whole of the reported area under wheat in India. There has in recent years been a steady upward tendency, subject however to great fluctuations, in the area and yield. In 1910–11 the estimated yield was over 10 million tons; in the unfavourable season of 1907–08 the area sown was much smaller, and the estimated yield little over 6 million tons. The season of 1911–12 was fairly favourable in the main wheat-growing tracts. The exports during the decade varied between 2,150,000 tons in 1904–05 and 110,000 tons in 1908–09. Experiments undertaken by the Agricultural Department at Pusa with a view to the improvement of Indian wheats, which are noticed in more detail in a subsequent section of this chapter, have given promising results.

	Area sown, in Thousands of Acres.	Estimated Yield, in Thousands of Tons.
Punjab	10,542	3,713
United Provinces	7,578	3,031
Central Provinces and Berar	3,559	864
Central India States	2,850	778
Total, including other provinces and states.	30,518	9,828

Barley.—No estimate of the total yield of barley is available. In the Punjab, according to the provincial reports, 1,339,000 acres in 1911–12 were estimated to produce 381,711 tons, or not much more than a third of the yield to be expected in England. The quantity exported, as in the case of wheat, varies greatly. The highest figure during the decade was 292,000 tons in 1911–12, the lowest 3,000 tons in 1902–03. The former figure was much above anything previously recorded.

Millets.—Indian millets are divisible into two groups, according to size. The larger millets, represented by *jawar* and *bajra*, are by far the more important. *Jawar* or *cholum* (*Sorghum vulgare*), the great millet, is, after rice, perhaps the most valuable single article of food in India. Its stems also constitute the chief cattle-fodder of a large part of the country. *Bajra* or *cumbu* (*Pennisetum typhoideum*), the spiked millet, has much the same geographical range, being grown over extensive areas in the north, west, and south. The grain is used chiefly by the lower classes, and in

many parts is their staple food. *Ragi* or *marua* (*Eleusine coracana*) is an important article of diet in the south of India, and is also largely grown in the uplands of Bengal. No estimate of the total yield is available. *Jawar* and *bajra* are not exported in very large quantities at any time, and very little is sent away in years of scarcity. The exports, however, exceeded 100,000 tons in 1903–04 and 1904–05.

Maize.—Maize is largely consumed in the form of ripe grain in Upper India, and is also extensively grown as a green vegetable. The crop from 955,000 acres sown in the Punjab in 1911–12 was estimated at 366,000 tons.

Pulses.—Gram (*Cicer arietinum*, also known as chick-pea) and other pulses are largely eaten in all parts of India. Gram alone is shown separately in the agricultural returns. It is grown mainly in the United Provinces and the Punjab, and is the most extensively consumed of all Indian cattle-foods. The area sown depends to a great extent on the character of the late rains; it fell in 1907–08 to less than seven million acres. The estimated yield in the Punjab in 1911–12 was 1,126,000 tons, or 615 pounds per acre. There is a considerable, though very variable, export trade in gram and pulse; the total export reached the unprecedented figure of nearly 347,000 tons in 1911–12.

Oil-seeds.—The most prominent oil-seed crops (apart from cotton-seed, which has, as is noticed below, risen to a prominent place among exported oil-seeds since 1900) are linseed, rape, mustard, sesamum (*til* or *jinjili*), and ground-nut. The seeds are to a large extent pressed in India, the refuse or cake being of great value to agriculturists, both as cattle-food and, in the case of the less edible sorts, as manure. But as the figures in the margin (for 1911–12) show, oil-seeds are also very largely exported.

	Area sown, in Thousands of Acres.	Estimated Yield, in Thousands of Tons.	Exports, in Thousands of Tons.
Linseed	4,946	641	522
Rape and mustard	6,749	1,283	240
Sesamum	4,526	371	95
Ground-nut	1,201	542	191

Note.—The figures for some native states are included.

The exports fluctuate considerably: in 1911–12 their total value (including castor, cotton, and other seeds) was nearly £18,000,000. The area under ground-nut, most of which is in Madras and Bombay, was more than doubled during the decade, and the exports, which had fallen to a very low figure in the preceding decade, showed a rapid recovery. Ground-nut cultivation has recently made considerable headway in parts of India where it was little known before, particularly in Upper Burma.

Sugar.—The sugar-cane is grown mainly in the United Provinces, the Punjab, and Bengal. The total area under the crop shows a tendency to decline rather than to increase, but there was no very marked change during the period under review. The highest figure shown in the returns, 2,706,000 acres in 1907–08, is comparable with the figures returned in the first half of the preceding decade, but in no other year since 1902 was this total approached. In the area taken into account in the crop forecasts, which does not altogether coincide with that to which the tables at the beginning of this section refer, it was estimated in 1911–12 that 2,332,000 acres under the crop would yield 2,390,000 tons of raw sugar (*gur*). India is thus a very large producer of sugar; but large and increasing quantities, amounting now to well over half a million tons a year, are imported. By no means all the sugar produced in India is converted into "refined" sugar; considerable quantities both of cane and of raw sugar or *gur* are consumed as food. A great deal has been done by the agricultural departments to improve the methods of cultivation and manufacture, defects in which admittedly hamper the Indian sugar industry in its competition with foreign rivals. In 1911 a sugar engineer expert was engaged to work for three years in the United Provinces in furtherance of these objects, and a small extracting plant suited to Indian conditions is being designed.* Other measures were also taken in the United Provinces.* Apart from improvements in cultivation and manufacture, much depends on the possibility of introducing canes possessing a larger percentage of sugar and a higher purity of juice. The canes of India from which sugar is made are of a low quality, and in order that the full benefit of modern developments in manufacture may be obtained it is necessary to raise the quality of Indian canes. This is the aim of the cane-breeding and acclimatisation station established since the end of the

* *See* page 241.

(Principal Crops.)

period under review in Madras, this location being chosen in view of the fact that seed production is practically impossible in Upper India. It is intended that the station shall work in close touch with experimental stations in the large cane-growing areas of the north. Besides the area under sugar-cane, the returns show under the head of other sugar-producing plants an area in 1911–12 of 156,000 acres in Burma, Bengal, and Madras. In spite of very defective methods of cultivation and subsequent treatment, nearly half a million tons of date-sugar are produced yearly in India, and recent work undertaken by the Agricultural Department indicates that there may be a considerable future before the systematic cultivation of date-palms for purposes of sugar production.

Cotton.—Various species of cotton are found wild in India, and the forms in general cultivation are very numerous. The crop is most important in Bombay and Berar, but it is grown to some extent in all parts of the country. The agricultural statistics of British India show an almost continuous expansion of the total area under cotton, from 9,610,000 acres in 1900–01 to 14,568,000 acres in 1911–12, Bombay, Madras, and the Central Provinces all showing a marked increase. The figures in the margin give the estimated output of the whole of the reported area under cotton, including native states, some of which—particularly Hyderabad, with over three million acres—contribute substantially to the totals. Much attention has been paid in recent years to the estimates of the cotton crop, which in some cases were shown to have been extremely defective in past years, and measures have been taken with a view to their improvement. For purposes of comparison, the total of net exports and consumption, including a conjectural estimate (made in consultation with the Bombay Cotton Trade Association) of the internal consumption other than that in mills, is also shown. The fact that the total estimated out-turn continues to fall short of the figure thus arrived at shows that there is still much room for improvement in the estimates of production. The question of improving the quality of the cottons produced in India has been constantly before the agricultural departments.* The most widely cultivated indigenous varieties produce cotton of a short and coarse type. The short-stapled cottons require a shorter period of growth and give a larger yield than long-stapled cottons, and under existing conditions it generally suits the Indian cultivator to produce cottons of the former class. The Indian grower has produced and can produce finer cotton, but a serious obstacle in the way of progress in this direction, now to some extent being removed, has been the difficulty the Indian cultivator has had in finding locally a ready and remunerative market for long-stapled cotton, the Indian markets as a whole being unaccustomed to deal in anything but short-staple. The efforts of the agricultural departments have, in recent years, been directed in the first place rather to the improvement of the indigenous varieties than to the introduction of exotic forms. The growing practice of separating the seed from the fibre in ginning factories, instead of as formerly by hand gins, had tended to injure the quality of the crop by mixing the seeds, and careless cultivation in some parts had helped in the same direction, while inferior varieties were ousting those of a superior type in many tracts by reason of their greater hardiness and more certain yield. The work done in the way of selection and distribution of seed by the agricultural departments has shown very encouraging results. Superior indigenous varieties have been separated and preserved, and their cultivation extended, particularly in Madras, Bombay, and the Central Provinces, and some promising hybrids have also been bred, while improved methods of cultivation have been worked out and demonstrated. At the same time extensive experiments have been made with exotic cottons. For many years past efforts have been made to introduce exotic varieties into general cultivation in various parts of India. Up to about 1902, indeed, it may be said that attempts to raise the standard of cotton cultivation in India always took this shape. A cotton of

—	Area.	Estimated Out-turn of Cleaned Cotton.	Net Exports and Consumption.
	Thousands of Acres.	Bales of 400 lbs.	Bales of 400 lbs.
1901–02	14,506	2,745,000	3,566,000
1902–03	16,581	3,367,000	4,050,000
1903–04	18,025	3,161,000	3,789,000
1904–05	19,918	3,791,000	3,944,000
1905–06	21,072	3,416,000	4,168,000
1906–07	22,484	4,934,000	4,855,000
1907–08	21,630	3,122,000	3,782,000
1908–09	19,999	3,692,000	4,200,000
1909–10	20,545	4,718,000	4,928,000
1910–11	22,596	3,853,000	4,303,000
1911–12	20,333	3,142,000	3,925,000

* *See also* page 239.

American type, locally known as Bourbon, has been grown for about a hundred years in parts of Madras, and for about forty years an acclimatised American variety has been grown in the Dharwar district of Bombay. In neither case, however, was cultivation at the beginning of the decade very extensive. It has been shown since that a good class of American cotton can be produced, under average circumstances, in Sind, and it is believed that an Egyptian variety can also be successfully grown there. Arrangements have recently been made for the cultivation of a small area with American cotton and for securing a market for the produce. It is reported that the possibilities for Egyptian and American cottons in Sind will be very great after the irrigation projects are completed. In the south of India, cottons of the Upland American type have made great progress. A cotton of the Upland Georgian type, passing under the name of Cambodia, has spread rapidly in Madras, where it was first introduced in 1904, and has given good results also in parts of Bombay, while in the Central Provinces *Buri*, another type of Upland Georgian that has been in India for some time, has been pushed with success. In 1912, Cambodia was being cultivated over some 125,000 acres in Madras, and Buri over some 10,000 acres in the Central Provinces. A yield of Cambodia valued at £1,000,000 was expected in Madras. In parts of the United Provinces and the Punjab also agricultural conditions seem suitable for the cultivation of acclimatised American cotton, but the want of a market for long-stapled cottons has restricted cultivation.

The exports of raw cotton, which during the decade increased greatly in quantity, and even more markedly in value, are dealt with in a later chapter.* In 1911–12 the total quantity was 7,328,523 cwt. and the value £19,683,627. The exports of cotton-seed, which in 1901–02 were valued at £309,000, and in the previous year at £37,000 only, have also increased rapidly, and amounted in 1911–12 to 4,073,110 cwt., valued at £1,012,752.

Jute.—Jute is grown mainly in Bengal, but the area under this crop in Assam has increased considerably in recent years, and small quantities are produced also in Cooch Bihar, Nepal, Upper India, and Madras. The figures vary from year to year, but there was no marked upward or downward tendency during the period under review. Cultivation reached a maximum in 1907, with an area of 3,974,000 acres and an estimated output of 9,818,000 bales of 400 lbs.

Indigo, Coffee, and Tea.—The area under indigo has declined greatly in all the provinces where the plant is grown, and coffee cultivation has fallen off somewhat both in Madras and in Coorg, as well as in Mysore, where the area under the crop is largest —over 100,000 acres. (Small areas are shown under coffee also in the returns from Upper Burma and Bombay.) In the case of tea, on the other hand, there is a general upward tendency. The area actually under tea is only about a third of the total area in the occupation of planters. The total number of plantations at the end of 1911 was 4,414, including 2,917 in the Punjab, where tea cultivation is conducted on a small scale and the average area of the plantations is less than 4 acres. In Assam there were 738 plantations, covering altogether 1,192,000 acres. Further reference is made to indigo, coffee, and tea in the chapter on Industries.

Opium cultivation is also dealt with elsewhere (*see* Chapter XII).

Tobacco.—The largest recorded area under tobacco is in Bengal, but that province takes practically no share in the higher-grade manufacture, the bulk of the leaf being exported in a crudely cured form to Burma or to foreign countries. In Southern India a fair amount of superior tobacco is grown and cured, and the manufacture of cigars is an industry of some importance in Madras.

Cinchona.—Cinchona is grown mainly on the Government cinchona plantations in the Nilgiri Hills and Darjeeling. There are also a number of private plantations in Madras. The Government plantations were started in 1862, with a view to securing a cheap and abundant supply of febrifuge for the people of India. Government factories, at which both quinine and a cinchona febrifuge containing mixed alkaloids are made, are attached to the plantations. The drug is issued to prisons, dispensaries, &c., and large quantities are sold through the post offices in the form of pice (*i.e.*, farthing) packets, which now contain 10 grains of quinine sulphate. The exports of cinchona bark have fallen off greatly in recent years—from 1,917,000 lbs. in 1901–02 to 410,000 lbs. in 1911–12. During the same period the imports of quinine rose from 43,000 lbs. to 125,000 lbs.

* *See* page 291.

Season and Crop Reports.

It is proposed in this section to give some account of the agricultural conditions prevailing in the different provinces in 1911–12, dealing only very briefly with the more important features of the earlier years of the decade.

Bengal.—During the first seven years of the decade the seasons in Bengal were more or less unfavourable, and harvests were below the average. Between 1906 and 1909 distress existed in various parts of the province, and test and relief works were opened. In 1909–10 and 1910–11 better conditions prevailed, and all relief operations were brought to an end by July 1909. In 1911–12, also, satisfactory harvests were reaped, and the condition of the people was reported to be favourable. The total out-turn of winter rice, which is the staple food-crop of the province, was estimated to be 103 per cent. of the normal, though some damage was done by floods in low lands. Conditions were also favourable for sugar-cane, which was estimated to give 2 per cent. more than the normal yield. The conditions for *rabi* crops were less satisfactory; heavy showers delayed sowing in some parts, and unusually dry weather followed, with the result that the provincial out-turn was estimated to be only 80 per cent. of the normal. In the new province of Bihar and Orissa the harvests in 1911–12 were good, as they had been also in the two preceding years, and the condition of the people continued to be satisfactory. The total out-turn for the province was reported to be above the normal in the cases of winter rice, sugar-cane, and *rabi* crops generally.

Eastern Bengal and Assam.—The decade opened with very good rice crops in Assam, but 1905–06 proved a very unfavourable season in the new province. In 1908–09 famine conditions prevailed in parts of Eastern Bengal, but the two following years were distinctly favourable for cultivators. The report for 1911–12, which deals with Assam only, records an exceptionally favourable season for winter rice, the most important crop, and an out-turn above the normal. The price of rice fell, but the prices of other crops were higher and made up for the loss to the cultivator on rice. In the Lushai Hills and the hills of Cachar district the seeding of bamboo brought a plague of rats, which consumed large areas of growing crops. The loss was met by the grant of agricultural loans and the importation of rice from the plains.

United Provinces.—Growing prosperity in the United Provinces was severely checked by an unprecedented frost early in 1905, and very poor crops in the following season necessitated relief operations in Bundelkhand and some other parts. The next year, 1906–07, was on the whole a good one, but drought beginning in September 1907 brought widespread distress, to which further reference is made below in the section dealing with famine. It was calculated that the yield of food crops in the *kharif* was 31 and in the *rabi* 60 per cent. of the normal yield on normal area, these figures indicating a total loss of something like 7,000,000 tons of food-grains. Except in a few localities, there was a rapid recovery in 1908–09, and the next two years were fairly prosperous. The year 1911–12 opened gloomily, and there were at one time serious apprehensions of a failure of the *kharif* harvest with its attendant consequences. As the season wore on, however, conditions improved, and the year terminated with one of the finest harvests on record. The situation at the beginning of August 1911 was critical, and it was not until September that good rain was received in Bundelkhand. The area under *kharif* crops was smaller than usual, as the drought of July and August interfered with sowings, and in some districts the early-sown crops partially failed; but the abundant rains of September and October favoured the sowing of a large *rabi*, and the excellence of the crop more than counterbalanced the deficiencies of the *kharif*. There was an extraordinary increase of 79 per cent. in the area under linseed, but the average yield was below normal. Wheat, barley, and gram were returned as giving a normal yield per acre, but it was doubtful whether these estimates did the crops full justice; the figures of total out-turn for these three crops were respectively 110, 124, and 121 per cent. of the normal. Steady improvement was reported from Bundelkhand, though the Muttra district, the other area that had in recent years shown signs of deterioration, remained in a depressed condition, the primary cause being a falling off in the populatio

Punjab.—The record of the Punjab followed the same general course as that of the United Provinces, but with the unfavourable features greatly mitigated. The proportion of cultivation under irrigation, it may be noted, is higher in the Punjab than in any other province, except Sind. Considerable damage was done by the severe frost of 1905, and by the failure of the monsoon later in the year, and the season of 1905–06 was disastrous to cotton, owing to the combined effects of drought and boll-worm. In 1907–08 about a third of the crops failed, but famine relief was necessary only on a small scale, as it had been in 1905–06 also. The next three years were years of great all-round prosperity, and throughout the decade the wheat crop, which is by far the most important in this province, generally did well. The *kharif* sowings of 1911–12 were greatly contracted owing to dry weather in April and May, and of the area sown, which was only 64 per cent. of the normal, no less than 31 per cent. failed as a result of prolonged drought in the summer months, some of the unirrigated crops suffering very severely. Autumn rains, beginning at the end of October, were responsible for very extended sowings, the area sown being 13 per cent. above the average. Untimely drought in February and March dashed to some extent the hopes of a record spring harvest, but with the help of showers in April and May a crop well above the average was finally obtained. The area sown with wheat was the largest recorded since 1907. An area of 1,339,000 acres under barley produced nominally 381,711 tons, an increase of over 58,000 tons on the previous year's figures attributed to the demands of breweries in Europe. The province came well through a trying summer, and most districts reported that the spring prices more than made up for the loss and anxiety of the autumn. Irrigation works played a great part in saving the situation; but over-irrigation is said to present serious problems in some districts.

North-West Frontier Province.—The seasons were generally favourable, and crops good, in the North-West Frontier Province. Wheat is the principal crop. In 1905–06, although the *kharif* harvest was poor, the *rabi* was excellent; but in 1907–08 the drought adversely affected both harvests, which were below normal. In 1911–12 the deficiency of rain throughout the greater part of the *kharif* season greatly restricted cultivation, especially in unirrigated areas, and increased the "failed" area, which in Dera Ismail Khan was no less than 70 per cent. of the total area sown. The *kharif* harvest, on the whole, was estimated at 19 per cent. below normal. The early winter rains were good, and a large area was sown for the *rabi*. As the result of deficient rain in February and March, the percentage of failure was again high, especially in Dera Ismail Khan, but the *rabi* harvest was, on the whole, a good one. The condition of the agricultural population was generally satisfactory, except in Hazara, where plague was prevalent, and in Dera Ismail Khan, where many cattle died or were sold and considerable debt was contracted.

Central Provinces and Berar.—Except for a failure of the rice crop in 1902–3, when famine was declared in one district and relief measures on a small scale were necessary, seasons and crops in the Central Provinces and Berar up to 1907 were good, or did not on the whole fall very far below the normal. In 1907–08, owing to the failure of the monsoon, the province as a whole reaped only half a normal *kharif* harvest, and the *rabi* harvest over a greatly restricted area sown was only moderate. Famine relief on a small scale was necessary. Recovery was rapid, and 1909–10 was an unusually good year for agriculturists. In 1911–12 agricultural conditions were, on the whole, favourable, the final results being a rice crop above the average, a normal cotton crop which would have been much better but for heavy rain at the end of November, and a wheat crop which promised well, but was considerably damaged during February and March by rain, rust, and insect pests, and in the end was below the average. On the whole, the condition of both labourers and agriculturists was entirely satisfactory.

Burma.—The all-important crop in Lower Burma is winter rice, for which in most years of the decade conditions were generally favourable. In Upper Burma, where rice takes a secondary place in most districts, a bad season, following in many parts on others not much better, was experienced in 1907–08, but the next year, which was on the whole an excellent one, set the people on their feet again, and an even better season for the agriculturists of the dry zone followed. The year 1910–11 was less prosperous in both divisions of the province. The agricultural year 1911–12 was like its predecessor a year of poor harvests. In Lower Burma the rice crop was destroyed

(Season and Crop Reports.)

by floods over extensive areas in August and September, and outside flooded tracts the full development of the crop was subsequently impaired by the failure of the late rains. Later still a cyclonic storm in January, when the bulk of the crop was drying on the threshing floor, did considerable damage. In Upper Burma also conditions were unfavourable. The early rains were good, but were followed by prolonged spells of drought in the dry zone, while the later rains, both inside and outside the dry zone, were insufficient in most districts.

The final estimate fixed the total out-turn of rice at 87 per cent. of a normal crop, and the exportable surplus at 2,425,000 tons of cargo rice.

In Upper Burma the variety of crops grown is now such that the rainfall, however local and precarious, usually brings one or another to maturity, though the failure of the rice harvest must always be serious. Although the season 1911–12 was adverse throughout the dry zone, there was no distress, and the history of the year was reported to have brought into prominence the growth in the resisting power of the agricultural population.

The area under rubber, mostly in the Tenasserim division, has increased rapidly. In 1907-08, the first year in which it was separately shown in the returns, it was 8,987 acres. In 1911–12 it was 32,772 acres.

Madras.—Throughout the decade the out-turn of crops in Madras was described as only fair, or below the normal; but the condition of the agricultural population was reported to be one of general prosperity. The rapid spread of Cambodia cotton, which has enhanced the value of inferior wet lands and of dry lands capable of being converted into garden land, has already been noticed. The area under cotton increased considerably, though not continuously, during the decade, the highest figure being reached in 1911–12. The area under ground-nut was more than doubled, amounting to 1,299,000 acres at the end of the decade. In 1911–12 the south-west monsoon was on the whole unfavourable, and the north-east monsoon favourable. The outturn of the principal crops, except sugar-cane, was below the normal.

Bombay.—The agricultural conditions differ widely in the various parts of the Bombay Presidency. The agricultural years 1904–05 and 1907–08 were generally unfavourable, and relief measures on a small scale were called for in some parts. In 1905–06, famine was declared in the Deccan and Karnatak, the number of persons in receipt of relief reaching 108,000 in May. In the same year, however, a good harvest was obtained in Gujarat. In other years, previous to 1911–12, conditions were generally fair or good, though measures of relief were necessary in some part or other in most years. The area under ground-nut was doubled during the decade, as in Madras, reaching 207,000 acres in the last year. In 1911–12 the season was very unpropitious, the rainfall being much below the average. The *kharif* crops in the three northern districts of Gujarat yielded almost nothing; those in the Konkan, the south of Gujarat, and the west of the Deccan and Karnatak gave only a fair yield; while elsewhere the yield was generally poor. *Rabi* crops were helped by irrigation wherever possible, but suffered from deficiency of water. Those not helped in this way yielded a moderate out-turn in favourable situations only: elsewhere they either withered or yielded poorly. Fodder was scanty almost everywhere, particularly in Gujarat, and grass had to be imported from outside. In Sind low inundation, coupled with deficient rainfall, brought about a reduction of 27 per cent. in the gross cropped area, as compared with the previous year. An encouraging feature of the year was the marked increase in well irrigation. Moved to activity by the adverse seasonal conditions and the need of providing for their cattle, the cultivators added 40 per cent. to the area irrigated from wells and more than trebled the area under green fodder crops. There was little or no actual distress among agricultural labourers, but agriculturists were undoubtedly hard hit, and the steady progress noticeable in recent years unfortunately suffered a temporary check.

Scarcity and Famine.

Some reference has been made in the preceding section of this chapter to cases in which failure of the crops necessitated the grant of some measure of relief to the agricultural population by Government. The period under review was not marked by any calamity comparable with the great famines of 1896–97 and 1899–1900,

and there is no occasion to refer at any length here to the subjects of famine and famine relief, especially as a full account of the most serious famine of the decade, that in the United Provinces in 1907–08, and of the measures then taken to deal with the situation, was laid before Parliament.* This Statement would, however, be incomplete without some reference to the policy and practice of Government in regard to the relief of distress resulting from the crop failures to which India is, for climatic reasons, peculiarly liable. It need only be remarked in passing that modern famine policy aims no less at prevention, so far as this is possible, than at remedial measures. In this connection, reference may be made to the information given elsewhere as to the Famine Insurance Grant and protective irrigation works.†

Famine relief, as now administered, is based on an elaborate system that embodies the results of much past experience. Standing preparations are made on a large scale in ordinary times; programmes of suitable relief works are maintained in each district, and the country is mapped out into relief circles of convenient size. When the rains fail, preliminary inquiries are started, and a careful look-out is kept for the recognised danger signals of approaching distress. As the uneasiness is intensified, the Government makes the necessary financial arrangements and declares its general policy, and "test works" are started. A test work is a work employing unskilled labour, usually earth work; the conditions are strict, but not unduly repellent. When the test works, or village inspection, disclose real distress, relief works are opened, the lists of persons entitled to gratuitous relief are revised, and the distribution of gratuitous relief begins. Distress usually reaches its maximum in May. Policy changes somewhat with the advent of the rains. Relief works are generally closed, and there is an extension of local gratuitous relief. The people are moved to small works near their villages, and liberal advances are made to agriculturists for the purchase of plough cattle and seed. Gradually the remaining relief works are closed and gratuitous relief is discontinued, and by the middle of October famine is ordinarily at an end.

The extension of communications, and particularly of railways, in recent years, has revolutionised relief. The final horror of famine, an absolute dearth of food, is now unknown. As the administration has been freed from the primary necessity of finding food, the relief system has become increasingly elastic. Relief works are organised with due regard to the feelings of the people. Those who cannot work are relieved, as a rule, in their villages, and children and weakly persons are specially treated. An elaborate scheme for making relief acceptable to forest and hill tribes has been worked out; and weavers and artisans, who formerly suffered on ordinary relief works, are now as far as possible relieved in their own trades. The strictness of Government relief, which must inevitably be confined to the provision of necessaries, is softened and supplemented by private relief funds, among which the Indian People's Famine Trust, founded in 1900 by a donation of £106,000 from the Maharaja of Jaipur, may be mentioned.

Some reference has already been made to the effects of the failure of the monsoon in the United Provinces in 1907. The immediate effect of the drought on the *kharif* or autumn crops was disastrous. In the plains districts as a whole, it was estimated that in place of a normal yield of rather more than six million tons of food-grains (valued at about £4 per ton), the actual yield was little more than two million tons, the deficiency, according to the best available data of consumption, representing an amount of grain sufficient to feed the 48 million inhabitants of the province for five months. To this loss of food had to be added a cash loss estimated at £8,000,000 on the industrial staples—sugar-cane, cotton, and sesamum. With the continuance of the drought into October, it became certain that there would be great difficulty in sowing the spring crops. Advances were at once made by Government on a generous scale for the purchase of seed for the spring crop and for the construction of wells for irrigation, and liberal suspensions and remissions of land revenue were granted. The liberality and promptitude of these measures encouraged the people to continue work in the fields and to sow as large an area as possible of spring crops instead of crowding on to relief works. For details of the preparations made to meet the serious famine that now became inevitable, and of subsequent events, reference must be made to the Parliamentary Paper referred to above. The first test work was opened at the beginning of November, but at the end of that month there were only 5,617 workers on the test works. The necessity for full famine relief measures therefore did not arise so early as in previous famines. Famine was first declared in two districts, where the

* Cd. 4487 of 1909.

† *See* pages 159 and 314–324.

(Scarcity and Famine.)

test works were converted into relief works, early in December, and by the end of that month there were over 42,000 persons on relief works in five districts. Gratuitous relief was being given, over a wider area, to some 25,000 persons. Timely rain in the middle of January saved large areas from famine, and greatly benefited the spring crops everywhere, but the area requiring relief expanded steadily, and the total number of persons in receipt of relief exceeded 500,000 before the end of the month. The maximum was reached in the middle of March, when 1,411,576 persons altogether were in receipt of relief, of whom over a million were on works, and almost the whole of the province was involved. The rains of January and February 1908 were not far from the normal, and for the province as a whole the yield of the spring crops was estimated at 60 per cent. of the normal yield on a normal area, the further loss of food-grains being put at three million tons. The total loss on food crops at both harvests, in terms of money, was put at £28,000,000, without taking into account the fact that unusually high prices were obtained for such produce as was sold, while the total loss on other crops was about £10,000,000. With the approach of the hot weather, arrangements were made for breaking up the large public works charges, and employing the workers on smaller charges and civil works. The numbers fell off after the middle of March, but as late as the middle of June there were still more than a million persons in receipt of relief. By the middle of July there had been good rain everywhere; relief works were gradually closed down, and after the end of August practically no relief was being given except by way of final doles. All relief operations were brought to an end before the middle of October, and the country very rapidly resumed its normal condition. The total remissions of land revenue on both harvests amounted to £516,500, while the collection of £603,500 was suspended. Among the other measures taken, mention may be made of the throwing open of all Government forests for the free collection of edible produce from November 1907 to September 1908. The orderly behaviour of all classes of the population was very noticeable throughout the famine, though there was a considerable increase, as is usual in a period of scarcity, in the number of petty thefts. The provincial death-rate, for the 11 months from September to July, was 36·47 as compared with a normal of 32·59; but the increase of mortality was slight as compared with the immediately preceding years, and the rate cannot be considered high, in view of the many dangers from epidemic disease that have always to be encountered in a season of famine. Cholera was widely prevalent, and accounted for nearly 40,000 deaths altogether, but of these only 508 occurred on relief works. Emaciated persons were naturally to be seen—people who had delayed coming to the works owing to a disinclination to leave their homes—but the proportion was small, and they were selected for special treatment under medical supervision. Eleven deaths only were recorded which, after full inquiry, could be attributed directly to want of food. There was no noticeable wandering. The total expenditure directly incurred in famine relief was £1,385,000, and the total cost, direct and indirect, including remissions of land revenue and advances, and loss of excise receipts, was estimated at £2,135,000. Non-official helpers gave much assistance to the administration, and the local Government concluded their review of the famine operations with a reference to the general opinion that the trial through which the province had passed had served to bring all classes into closer sympathy both with each other and with the Government.

In the Central Provinces, where also there was a serious failure of the crops in 1907–08, it was possible by means of an extension of ordinary public works and works constructed by land improvement loans to meet to a great extent the abnormal demand for employment, and thus to avoid recourse to large works carried on under the provisions of the Famine Code. A limited number of village works were opened, and gratuitous relief was given as required. The total number of persons relieved reached a maximum of 51,161 in August 1908. Land revenue to the amount of £135,000 was suspended, and some £20,000 was remitted. Cases of petty crime increased, but the death-rate for the whole province was below the mean, and in the districts where the crop failure was greatest the year was a remarkably healthy one. The local Government reported that the people bore their losses and troubles with fortitude, and that, if at first there was a disposition to wait on the Government, this spirit very soon gave way to one of self-help, and that this was the most striking feature of the year. Special measures were taken to help weavers, of whom more than 15,000 were in receipt of relief at one time, and this valuable home industry was supported and kept intact through a period of extreme depression at a comparatively trifling cost and without any demoralisation.

In Bengal and Bombay also relief operations in 1907–08 were on a comparatively small scale, famine being declared in each case in one district only, though distress of a less severe description was more widespread.

The other cases in which limited areas suffered from scarcity in the first nine years of the decade do not call for special notice in this section.

At the beginning of the agricultural year 1911–12, the weather gave cause for anxiety in various parts of India, including the Punjab and United Provinces, but so far as British India was concerned, distress became acute only in parts of the Bombay Presidency, the area most seriously affected being the Panch Mahals district, where famine was declared on the 1st October 1911. The total numbers in receipt of relief in that district rose to over 95,000 in April 1912, after which they fell until relief works were closed at the end of August. Gratuitous relief was given in several other districts of Bombay, and in some districts test works were opened. Relief measures of various kinds were necessary also in Baroda, in several of the Bombay native states, and in some of the Central India and Rajputana states.

The Agricultural Departments.

Expansion of the Departments.—The Agricultural Departments in India as they now exist may be said to be a creation of the last seven or eight years. There have for a good many years past been experimental farms, under official control, in various parts of India, but they were in the past to a large extent in the hands of amateurs, and the work of the agricultural departments, with which all the major provinces were provided by about 1884, was in the main confined to the simplification of revenue settlement procedure and the improvement of the land records system. In 1901 the appointment of an Inspector-General of Agriculture gave the Imperial Agricultural Department for the first time an expert head, and placed the Government of India in a position to enlarge the scope of their own operations and to co-ordinate the work being done on independent lines in various provinces. At that time the Imperial staff (*i.e.*, the staff attached to the Government of India) consisted of an Agricultural Chemist and a Cryptogamic Botanist, while trained Deputy Directors of Agriculture were employed only in Madras, Bombay, and the United Provinces, and the Economic Botanist in Madras was the only provincial representative of the more specialised type of appointments. Within the next few years a number of new appointments were made, so that by March 1905 there were altogether 20 sanctioned agricultural posts; of these, seven were Imperial, including a number of specialist appointments attached to the Agricultural Research Institute and College, the establishment of which at Pusa in Bengal was sanctioned in 1903. A great impetus was given to the development of the agricultural departments by the decision of the Government of India in 1905 to set apart a sum of 20 lakhs (£133,000) a year for the development of agricultural experiment, research, demonstration, and instruction. Their ultimate aim, as then expressed, was the establishment of an experimental farm in each large tract of country in which the agricultural conditions are approximately homogeneous, to be supplemented by numerous small demonstration farms; the creation of an agricultural college teaching up to a three years' course in each of the larger provinces; and the provision of an expert staff in connection with these colleges for purposes of research as well as education. The eventual cost, it was recognised, would largely exceed 20 lakhs a year. The grant in question, it should be mentioned, was to be shared with the Civil Veterinary Department, which is dealt with in a subsequent section of this chapter. The figures in the margin, which show the expenditure included under the subhead "Agriculture" in the Finance and Revenue Accounts of each year, illustrate the rapid expansion of the agricultural departments, and of their work, throughout the decade. The figures do not include expenditure on cinchona plantations, botanical gardens, or buildings. Among the latter the Pusa Research Institute and College alone has cost nearly £150,000, including equipment. A part of the cost was met from a sum of £30,000 placed at Lord Curzon's disposal by Mr. Phipps, an American visitor to India. This example of munificence has recently been followed by Sir Sassoon J. David, who has placed the sum of £53,300 at the disposal of the Government of Bombay for the establishment of vernacular agricultural schools and the improvement of agricultural methods, in com-

	£
1900–01	10,479*
1901–02	16,194
1902–03	21,765
1903–04	33,160
1904–05	47,618
1905–06	98,525
1906–07	116,562
1907–08	143,252
1908–09	168,682
1909–10	190,286
1910–11	193,880
1911–12	215,667

* Includes "local" expenditure, since excluded from the accounts.

memoration of the visit of Their Imperial Majesties to India. At the beginning of 1912 there were over 40 posts in the Indian Agricultural Service, besides that of Inspector-General, which was abolished at the end of the year 1911–12, the rapid advance of the provincial departments having rendered its continuance unnecessary. The officers serving directly under the Government of India included the Director of the Pusa Institute, who was also Principal of the Agricultural College, a cotton specialist, two mycologists, three entomologists, two agricultural chemists, and an economic botanist. Some of these were supernumerary officers undergoing training. The provincial agricultural departments vary in strength. Generally speaking, each of the larger provinces has at least a Deputy Director of Agriculture (most provinces have two), an Agricultural Chemist, and an Economic Botanist. In several provinces the principalship of the Agricultural College is a separate appointment, and among the remaining officers are a fibre expert in Eastern Bengal and Assam, and a "scientific officer for planting industries in Southern India" in Madras. The Government of Madras have also a mycologist and an entomologist of their own. The posts so far referred to have hitherto necessarily been filled almost exclusively by the appointment of trained specialists from the United Kingdom. There are also in the various provinces a considerable number of locally appointed Assistant Professors (in the agricultural colleges), Assistant Agriculturists and Entomologists, Agricultural Inspectors, Superintendents of Farms, &c., and subordinate officers. It is an essential part of the scheme adopted that facilities for the best agricultural training shall be made available in India, in order that the country may become self-supporting, so far as possible, in regard to the scientific development of agricultural methods on lines suited to local conditions. Provincial agricultural colleges, which are also research stations, have within the last few years been established in Madras, Bombay, Bengal,* the United Provinces, the Punjab, and the Central Provinces. The Central College at Pusa is intended to provide for more advanced training, and gives also short practical courses in subjects not at present taught in the provincial colleges. The provincial Directors of Agriculture have so far been selected from the ranks of the Indian Civil Service, and they still in some provinces have other functions besides the supervision of the agricultural department; but in all the larger provinces except the United Provinces the appointment of Director of Agriculture has since 1905 been separated from that of Director of Land Records.

The rapid extension in India in recent years of the use of machinery in connection with agriculture and irrigation has created a demand for expert assistance, to meet which Agricultural Engineers have since the end of the period under review been appointed in Bombay and the United Provinces to advise cultivators as to engines, pumps, threshing machinery, &c.

The separate appointment of Inspector-General of Agriculture was, as mentioned above, abolished from the 1st April 1912, the duties of the post being combined with those of the Director and Principal at Pusa, who is now entitled Agricultural Adviser to the Government of India and Director of the Agricultural Research Institute.

An important advance in the direction of bringing the provincial agricultural departments more closely into touch with one another was made in 1905 by the creation of the Board of Agriculture. The Board, which includes the Imperial and provincial experts, meets annually to discuss the programmes of agricultural work, and agricultural questions generally, and makes recommendations which are submitted to the Government of India for consideration.

Work of the Departments.—The work of the Agricultural Department has two main aspects. On the one hand, by experiment and research, improved methods or crops are developed, or the means of combatting a pest are worked out; on the other hand, ascertained improvements must be demonstrated and introduced as far as possible into the practice of the Indian cultivator. There is an essential difference between agricultural departments in the East and in the West in that, whereas the latter have arisen to meet the spontaneous demands of the cultivators of the soil, the former are entirely the creation of a government anxious to give all the assistance it can to its agricultural subjects. The demand for improved agriculture has not in India, except in special cases, come from the cultivator, and it is necessary for the Department to put forth every effort, first to ascertain the needs of the cultivators and then to demonstrate how they can most effectively be met. It is only a few years since work on modern lines was commenced by the reorganised agricultural depart-

* The Bengal College, being in Bihar, has now been transferred to the new province of Bihar and Orissa.

ments, and, in the first place, a great deal of spade work had to be performed. A staff had to be recruited from Europe, and to make itself acquainted as fast as possible with Indian conditions, and Indian assistants had to be selected and trained; but in spite of these initial difficulties, and of the slowness of experimentation inherent in work that is limited in progress by the seasons, a great deal has already been achieved. It is impossible in this Statement to deal in any detail with the many-sided activities of agricultural officers in different parts of India; the lines of work noticed in the following paragraphs are selected as examples of those along which the practical value of the results so far achieved has been most marked.

Cotton has from the first received much of the attention of the new departments. Reference has been made above* to the very striking results already achieved, and more particularly to the success attained with Cambodia and other exotic varieties. Something may be added here as to the second line of improvement, the separation and selection of indigenous varieties. In Madras the efforts of the Agricultural Department have resulted in the spread of the local improved variety called *karungany* in the Tinnevelly District and white-seeded Tellapathi cotton in Kurnool, both of these varieties having been selected from among the mixtures ordinarily grown in the districts. A system of seed distribution was gradually built up, and now, after five or six years' work, there is a vast area under *karungany*. The Department supplies pure seed to contract seed growers and buys the seed-cotton from these men, gins it, and arranges the distribution of seed through village depôts. The seed grown by the contractors is under strict control and comes back to the Department every year. The areas over which the improvements have been carried have become so large that the trade has been influenced, and striking testimony has been obtained from some of the largest exporting firms to the improvement in the general crop. In Bombay, two have been selected as the best out of many hybrids and pure line cottons bred and tried for many years on the Surat farm. They give a distinct advantage both in quantity and quality over the ordinary local cotton, and promise to sell at rates 5 per cent. higher. In another part of the province arrangements are being made to distribute on a large scale seed of another improved form, which can be grown, it is estimated, over 1,300,000 acres. In the Southern Maratha country, Broach cotton, introduced by the Department, is gaining favour and has been sown over 5,000 acres. There is said to be scope for 250,000 acres, and the increased profit to the cultivator is estimated at £1 or more per acre. In the Central Provinces also, two indigenous varieties have been selected. The seed was grown on Government farms and distributed to cultivators, and, a large demand having sprung up, seed farms were established in different centres. There were in 1912 about 100 seed farms, capable of producing one million pounds of seed for distribution to cultivators. These farms do not belong to Government, but are owned by landholders and cultivators, the work being controlled and supervised by the officers of the Agricultural Department. By these means the quality of the cotton crop is being gradually revolutionised. About 100,000 acres were in 1912 under one selected variety, the increase in the cultivators' profits being estimated at about £60,000. In the United Provinces seed of a superior variety is being distributed, and a study of various indigenous cottons from the scientific point of view, which has been in progress for some years, promises to give results of great value.

Wheat also has been the subject of prolonged experiments. One of the first results of the investigations, carried out at Pusa, was the demonstration of the fact that varieties with milling and baking qualities similar to those of the best wheats on the English market could be grown to perfection in Bihar. By the application of modern methods of selection and hybridisation these high grain qualities were successfully combined with high yielding power, rust-resistance, and strong straw. Trials were then carried out, in 1910–11 and 1911–12, in other wheat-growing areas. Different varieties gave good results in the United Provinces, Punjab, and Central Provinces, and in the United Provinces arrangements are being made to meet the considerable demand for seed that has already arisen. In Bihar the trials in 1911–12 showed that the yield was on the average at least twice as large as that given by the local wheats, and it was anticipated that in 1912–13 between 10,000 and 15,000 acres would be sown with the new wheats. Some 500 acres were also to be sown on three estates, under the supervision of the Imperial Economic Botanist, for seed purposes. Pusa wheats, it may be mentioned, have been tried with satisfactory results by the

* Page 230.

(The Agricultural Departments.)

agricultural departments of South Australia and Hungary, and a request for a supply has come also from Canada. Incidentally the wheat investigations have led to the development of improved methods of cultivation which can be applied to other crops so as to give greatly increased yields. Descriptions of these methods in the vernaculars have been circulated.

Another crop with which considerable success has been attained is ground-nut, the cultivation of which had at the beginning of the decade fallen off, owing partly to the prevalence of a fungoid disease and partly to deficient rainfall. Exotic varieties with a better yield have been introduced in Bombay, and in Burma cultivation has advanced with extraordinary rapidity. The crop was introduced into the dry zone of Upper Burma about 1900, and its admirable suitability to those parts led the Department to popularise its cultivation by distributing seed and leaflets. The crop is now grown over a very large area in the dry zone.

Another success of marked importance achieved by the efforts of the provincial agricultural departments is the introduction of agricultural implements and machinery suited to the conditions of different provinces. Information and assistance in regard to the choice of implements suitable for various conditions has, under present circumstances, to be interpreted and brought home to Indian cultivators by a more direct agency than business firms, and the agricultural departments have therefore to do a good deal of this work. They have succeeded already in introducing various kinds of implements in different parts of the country. Every assistance is given in the use and repair of implements recommended. Up to the present, the departments perform to a certain extent the functions of dealers in implements, but it is becoming difficult to control the work as the area covered by the introductions is gradually becoming large, and a need for the development of co-operative societies is felt. In Bombay, the Department has introduced ploughs of various patterns and is selling a large number each year. In some provinces iron ploughs are becoming very popular. The possibilities of improved harrows, cultivators, and clod-crushers are also receiving attention.

One of the most valuable lines of work has been the devising of methods for the production and maintenance of pure seed of improved varieties of crops, without which all improvements in a crop would be in vain. The methods adopted in the case of cotton in Madras and the Central Provinces have already been mentioned. In the wheat-growing tracts of the Central Provinces, similar efforts are being made, so that, beginning from a central farm, a gradually increasing area is being sown with one wheat only, to the great advantage of the growers and the trade. The success of seed distribution having been so marked in the Central Provinces and Madras, other provinces are following their example. Seed farms, on which seed was grown on a large scale by the Department itself, were established in the Punjab some years ago, and jute seed has been grown by the Bengal Agricultural Department. Where seed is not grown by the Department, seed depôts, at which the best seed available is sold, have been in many cases maintained.

One experiment may be mentioned by reason of its far-reaching possibilities. There are several million acres of land in India rendered infertile by alkali salts. A small area of land of this kind in Sind, which had been absolutely infertile for centuries, has recently, by means of irrigation, combined with a system of open drains, been rendered capable of growing heavy crops, which would, it is reported, repay the cost of reclamation in a single year.

Measures taken with a view to controlling diseases and pests have in some cases given noteworthy results. The steps taken to deal with the Palmyra palm disease in the Godaveri Delta have prevented its spread to other areas, and have possibly saved an entire industry from extinction. Smut in jawar has been fought in the Central Provinces and Bombay by pickling the seed, and the practice has made headway amongst the cultivators. Similarly, potato disease has been prevented by spraying in parts of Bengal and Assam. As regards insect pests, methods advised by the Imperial Entomologist have in some cases resulted in an appreciable decrease of the damage. Efforts are now being made in the Punjab to subdue the cotton boll-worm by the introduction of a parasite.

Only the briefest reference can be made to the various methods adopted of bringing improvements to the notice, and into the practice, of cultivators. Experience has shown that the Indian cultivator is not nearly so conservative as is often supposed; if a really good improvement is presented to him, he is willing to take it up, if it is within his means, though he cannot afford to take risks. The winning of the

confidence of cultivators is the first condition of success. In some provinces the organisation of local bodies termed Agricultural Associations has proved a very useful means of arousing interest and making improvements known. In the Central Provinces, for example, there are associations in all districts, composed of substantial agriculturists, who meet from time to time, discuss matters with agricultural officers, and carry out demonstrations with their assistance. In Bombay, and to a less degree in some other provinces, similar associations have also done good work. Local demonstrations, generally on small plots lent by cultivators, or sometimes on estates under the Courts of Wards, are carried out in a large number of places. Itinerant assistants and expert cultivators employed by the departments serve the same purpose. Leaflets and circulars in the vernacular are issued in most provinces, and vernacular agricultural journals are published by the Department in the United Provinces and Central Provinces, and by some of the agricultural associations in Bombay. Agricultural shows and exhibitions are held, and advantage is also taken of local fairs. Short courses for cultivators are held on farms in some provinces, and in Bombay a vernacular boarding school for training the sons of substantial cultivators has recently been started as an experiment. Assistance has been given in the marketing of cotton where the difficulty of obtaining full value hindered the introduction of new varieties.

Reports for 1911–12.—Some of the main features of the work in the different provinces have been noticed in the general account of the work of the Department. Reference to the separate provinces must be limited to a few notes on the reports for 1911–12.

Bengal.—Successful results were obtained in connection with the production and flue-curing of cigar and cigarette tobacco; the work is to be extended, and steps will be taken to distribute improved seed to ryots. Work was continued in connection with the production of an improved race of jute, and the investigation of "heart damage." Miscellaneous work was done in connection with the analysis of soils and crops, the study of varieties of rice, oil seeds, &c., entomology, mycology, sericulture, and fisheries.

Bihar and Orissa.—Scientific work consisted of the classification of the varieties of crops and the investigation of their characters. As regards demonstration work, great success was attained in promoting the storage of potatoes in sand to avoid the potato moth. Well-boring work in the Patna division, where there appears to be a promise of useful expansion, was successfully re-organised.

Assam.—Experimental work was done with sugar-cane, potatoes, fruit trees, and fodder crops. Demonstrations in connection with the manuring of winter rice with bonemeal in the Khasi Hills gave satisfactory results, and the practice is reported to be spreading rapidly. Since March 1912 good progress has been made with the strengthening and reorganisation of the Agricultural Department of the reconstituted province.

United Provinces.—The year witnessed an expansion of the operations of the Department in several important directions. Two new farms were opened in connection with measures for the improvement of cotton, one for the trial on a large scale of new types of cotton, and the other for use as a distributing centre for selected cotton. Two farms were opened also in the principal sugar-growing tracts, where previously none existed; these will make possible the selection for distribution of the best indigenous types and the trial of exotic varieties, and also the more complete investigation of a number of problems. The earliest agricultural stations opened were in the cotton-growing districts, with a view mainly to cotton improvement. Of late years the question of improvement of sugar-cane has been forced to the front by the heavy importations of Java sugar, and the necessity of trying to meet this competition by better methods of cultivation. With the opening of these two farms a definite step was taken in this direction. The demand for an increase in the number of farms continued, and requests were received for their establishment in several new districts. The Agricultural College at Cawnpore, which had been at work for some time, was formally opened in November 1911. Ground-nut, a crop which until a few years ago was little known, has become very popular in some parts, and was expected to be sown over 20,000 acres in 1912.

Punjab.—Further experiments were made with various types of wheat and cotton, but the important work of selecting and comparing the different botanical types comprised in the mixtures known as Hansi and Multan cotton had so far made little

(The Agricultural Departments.)

progress. A great step forward was the development of a definite demand in the Lyallpur market for American cotton, which was bought at a higher price than country cotton and separately ginned, but the demand for American seed was disappointingly small. Boll-worm did much damage to cotton in some districts in 1911 ; conditions appear to have been unfavourable for the attempts made to secure their infection with parasites.

North-West Frontier Province.—The Tarnab experimental farm, started in the preceding year, made good progress. The farm is now fully equipped, and a large number of trial crops were sown. An experimental fruit farm was also inaugurated. It is hoped that improvements in the methods of cultivation, which are still in general extremely primitive, will follow.

Central Provinces and Berar.—The work done in connection with cotton has already been noticed. The Department is considering the possibility of the extension of cotton in parts where it has hitherto been unknown, and the introduction of a longer-stapled cotton in tracts with a heavier rainfall than that of Berar. Apart from cotton, the principal lines of demonstration work dealt with transplanted rice, sugar-cane, and the destruction of pigs. The Agricultural Associations continued to do good work. An unsatisfactory feature was that the Agricultural College was not succeeding in attracting any considerable number of the cultivating castes. The expansion of the work of the Department was mainly in response to increasing demands made on its activities on lines of already proved practical utility. The demand for agricultural implements is steadily increasing, and agriculturists are now coming forward for comparatively expensive machines.

Burma.—Cambodia cotton, the seed of which was obtained from Madras, was under trial, and it is hoped that it may be possible to establish the crop in some parts. The distribution of Havana and Virginia tobacco seed, which has been practised for many years, was continued ; the opinion is expressed that there has been a marked effect on the tobacco supply of the country. Surveys of peas and beans, wheats, and other crops, were in progress. The number of inquiries addressed to the Department, and the direct correspondence with Burmans, steadily increase. A scheme for the creation of a staff of district vernacular agriculturists has been sanctioned as an experimental measure.

Madras.—The improvement of cotton has already been dealt with. A steady advance was made in popularising and extending to tracts where they were before unknown practices such as the purchase of fresh improved seed, economy in the use of seed, growing green manure crops, and adopting suitable rotations. As regards economy in the use of seed, it was calculated that if the reduced seed-rate for paddy advocated by the Agricultural Department as a result of its experiments were universally adopted, the saving to the ryots on seed alone would be something like £700,000 a year. Two new agricultural stations were opened, and the growing volume of correspondence and inquiries was a gratifying indication that the educated cultivating classes are beginning to realise the utility of the Agricultural Department. Except on the West Coast, the Agricultural Associations, which were not constituted on the best lines, were reported to be defunct or moribund. Proposals for combining them with co-operative societies were under consideration.

Bombay.—Subjects of investigation (apart from cotton) included the occurrence of salt efflorescence in the black soils of the Presidency ; the varieties, insect and fungoid pests, and systems of grafting, of the mango ; the varieties of rice ; the cultivation of sugar-cane, and the question of fodder. Large quantities of seed of foreign varieties of groundnut continued to be distributed in tracts where this crop was comparatively unknown, and the market could not supply the demand. Apathy, want of capital, and distrust of new methods are more apparent in the matter of the introduction of new implements than in regard to other improvements. The Department in order to meet well-known objections to the use of the improved implements keeps a large stock of spare parts and demonstrates their proper use. An arrangement has been made with a syndicate formed by the leading merchants of the Bombay cotton trade for the purchase of selected cottons, and a system by which seed of these cottons has been distributed has been devised. Auction sales for Broach and Cambodia cotton have also been organised by the Department in one or two places. Owing to the prevalence of the small landholder, the hiatus between departmental experiment and the adoption

by cultivators of proved successes is, in Bombay, always difficult to fill. Agricultural Associations and co-operative societies are doing something in this direction.

Live Stock, Ploughs, and Carts.

The statistics of agricultural stock in India are very defective, though improvements have been made in most provinces in recent years. In some cases figures are collected annually, but a quinquennial cattle census is now the most usual arrangement. For Bengal no complete figures are available, and that province is therefore omitted from the table below. Animals in towns and cantonments are included in some of the returns, but omitted from others. Subject to these remarks, the table below gives some idea of the numbers and distribution of animals in the larger provinces. The figures are the most recent available; in several cases there was a quinquennial census in 1909.

Figures in Thousands, omitting 000.

	Bulls, Bullocks, and Cows.	Buffaloes.	Calves and Buffalo Calves.	Sheep.	Goats.	Horses and Ponies.	Mules and Donkeys.	Camels	Ploughs.	Carts.
Upper Burma	2,086	216	811	31	110	60	1	—	144	328
Lower Burma	1,431	550	635	2	73	20	—	—	399	290
Assam	1,602	263	849	8	584	11	—	—	466	28
Bihar and Orissa	10,391	2,161	2,136	952	3,565	163	25	—	2,904	525
Agra	11,778	3,150	6,676	2,147	5,014	363	266	13	3,389	628
Oudh	5,249	1,100	2,470	709	2,138	144	47	3	1,559	155
Punjab	7,635	2,866	3,821	4,592	4,253	360	623	271	2,170	288
N.W. Frontier Province	759	162	294	621	577	27	122	41	215	6
Sind	1,315	288	502	424	1,074	84	106	116	275	48
Bombay	4,317	1,112	2,143	1,847	2,052	113	71	1	1,012	547
Central Provinces	5,744	1,108	2,408	339	1,012	107	20	—	1,224	606
Berar	1,418	263	496	186	447	31	24	—	179	209
Madras	11,165	3,450	5,474	10,752	7,426	53	135	—	3,896	1,279
Total British India, excluding Bengal	65,152	16,751	29,810	22,948	28,555	1,540	1,447	447	17,904	4,950
Total, 1901–02	52,079	13,130	25,922	18,029	25,173	1,302	1,249	393	14,104	3,361

In western countries cattle are bred principally for milk and meat production; in India cows are kept chiefly to produce work cattle, and milk is largely obtained from buffaloes. Camels are employed for tillage to some extent in Northern India, but in the country as a whole agricultural operations, and also the transport of goods by road, mainly depend upon the draught power of bullocks and male buffaloes. There are numerous indigenous breeds of cattle, differing to a remarkable extent in size and type. The finest cattle are bred in Northern Gujarat. In many parts deficiencies in the supply of fodder and lack of care in breeding tend to produce cattle of a very inferior class. A very considerable proportion of the cattle are old and decrepit, and are therefore useless for breeding or for work, but are maintained owing to the sanctity of the cow among the Hindus and their general disinclination to take life. There are a number of Indian breeds of sheep, mostly inferior, whether as mutton or as wool-producers. Varieties of goats also are numerous, the flesh of the goat being largely used in India instead of mutton.

A comparison of the recorded figures for the beginning and end of the decade, though no great reliance can be placed upon it, goes to show that there has been a general increase in the number of live stock; but in some provinces the supply of plough cattle is hardly keeping pace with the demand.

The Civil Veterinary Department.

To the Civil Veterinary Department, which originated in 1892 as an expansion of the military horse-breeding department, is entrusted the performance or supervision of all official veterinary work in India, other than that of the Army. Its duties fall under the main heads of cattle disease and cattle-breeding, horse and mule breeding, and educational work in veterinary colleges. It has been mentioned above that a part of the annual grant of 20 lakhs made in 1905 for agricultural development

(The Civil Veterinary Department.)

was intended to be devoted to the improvement of the Veterinary Department. Between 1895 and 1904 there had been a very general development of veterinary work. Subordinate veterinary departments on a gradually extending scale had been established in most of the provinces, institutions for the training of veterinary practitioners had been developed and improved, numerous veterinary dispensaries had been established, opportunities for promoting cattle-breeding had been enlarged by the acquisition of the Hissar Cattle Farm, useful work had been done in the examination and description of local breeds of cattle, a fully equipped laboratory in the hills at Muktesar (United Provinces) with a branch in the plains (at Bareilly) had been completed, successful researches into the nature of cattle disease had led to the manufacture of a protective serum of great value, and measures had been devised for dealing on a systematic and enlarged scale with rinderpest and other epidemic diseases of animals. Most important of all was the work being done in connection with the prevention of cattle disease by inoculation. An important change was made in 1903, when the entire control of horse, mule, and donkey breeding in the districts in which such operations specially flourish was made over to the Army Remount Department. The Civil Veterinary Department, which from the circumstances of its origin had hitherto devoted a great part of its energies to horse-breeding, was thus set free to give much more attention to questions connected with cattle.

In 1904 the cadre of the Imperial Civil Veterinary Department included 22 appointments; there were at work 130 veterinary dispensaries and 319 veterinary assistants, supervised by 16 veterinary inspectors, while colleges and schools for the training of assistants had been established at Calcutta, Madras, Bombay, Rangoon, Lahore, and Ajmer.*

In 1905 and the following years both the superior and the subordinate establishments were considerably increased. The figures in the margin show the increase of expenditure under the head "veterinary and stallion charges" in the accounts of the Government of India. The drop in 1903–04 was due to the transfer of horse-breeding in selected districts to the control of the Army Remount Department. The figures do not include the very considerable expenditure on veterinary purposes of local bodies. In 1911–12 district and local boards spent £42,441 under this head, and municipalities £10,021. At the end of the decade there were 32 officers in the Imperial branch of the Department; the subordinate staff employed during 1911–12 included 81 inspectors and 816 veterinary assistants, besides 11 members of the subordinate teaching staff. The number of veterinary dispensaries had increased by the same date to 353. There was thus a great expansion during the decade in every direction, but the strength of the subordinate staff in most provinces was still far short of the sanctioned establishment, the demand for veterinary graduates being greater than the supply, and the European staff remained small in proportion to the volume of work calling for attention. The post of Inspector-General, Civil Veterinary Department, was abolished with effect from the 1st April 1912, the duties being transferred partly to local Governments and partly to the Agricultural Adviser to the Government of India. During the latter part of the decade, small veterinary departments, modelled on the Civil Veterinary Department, were started in several native states.

	£
1901–02	71,156
1902–03	70,354
1903–04	49,475
1904–05	48,784
1905–06	67,866
1906–07	76,498
1907–08	83,913
1908–09	86,845
1909–10	96,710
1910–11	99,438
1911–12	121,296

Horse, Mule, and Donkey Breeding.—In the selected horse-breeding districts—in the Punjab, Baluchistan, the United Provinces, and Sind—which were transferred to the Army Remount Department in 1903, the Civil Veterinary Department is no longer concerned with equines, but the control of horse, pony, and mule breeding in non-selected districts suitable for the purpose continues to form a very important duty of the Department. In these districts there were at the end of the decade 74 horse, 104 pony, and 104 donkey stallions under local bodies. They were practically all in the Punjab, United Provinces, North-West Frontier Province, and Bombay. The horses and ponies were mostly Arabs. The total number of mares covered in 1911–12 by the district stallions was 13,862. Mule-breeding is carried on to some extent at the Government cattle-farm at Hissar. An experiment carried out there with four zebra stallions imported from Africa in 1904 was abandoned three or four years later as a failure, only two zebrules having been born.

* The Ajmer school was abolished in 1905.

(The Civil Veterinary Department.)

Cattle-Breeding.—There appears to be no doubt that with the extension of cultivation, which carries with it an increased demand for plough-bullocks, there has been a decline in the cattle-breeding industry. Apart from the fact that the available grazing is decreased, the growing of crops is reported to be generally a far more profitable occupation than the breeding of cattle. The quality of the cattle also is tending to deteriorate. The efforts of the Civil Veterinary Department are directed to making available good bulls of the best breeds. The number of stud bulls shown in the returns increased considerably during the decade. On the 1st April 1904, the first date for which figures are available, there were altogether 75 owned by Government and 186 owned by local boards; of the total number, 242 were in the Punjab. The latter province still held the first place, with 517 bulls, at the end of 1911–1912, but other provinces showed an advance, so that there were altogether 782 bulls—61 the property of Government, and 721 belonging to local boards. There were in 1912 seven provincial cattle-farms, at which bulls were bred and sold, besides the Government Cattle Farm at Hissar in the Punjab. The stock at the latter has been raised to a high level of quality, and it was reported some years ago that the herd was far and away the finest in India. There were on the farm at the end of 1911–12 21 bulls and 1,253 cows, besides a large number of young stock, cultivation bullocks, sheep, donkeys, and mules, and a few goats. A fixed type of cattle is now being produced, and is reported to be much appreciated by those who take stud bulls from the farm. Experiments in sheep-breeding have been going on for some years at Hissar and elsewhere with merino rams imported from Australia.

Horse and Cattle Disease.—The statistics of animal diseases in India are very imperfect, the figures representing only those cases that are brought to the notice of veterinary officers. The figures for 1911–12 given in the margin cannot be taken, therefore, as representing the total mortality; but they will serve to indicate roughly the chief diseases and their relative prevalence. Cattle disease is in many parts of India a very serious affliction and a direct obstacle to the amelioration of the condition of the cultivator. The laboratory established by Government for veterinary research and the manufacture of sera, with a view to combating cattle disease, has already been mentioned. Inoculation against rinderpest made great progress during the decade, as may be gathered from the fact that 698,000 doses of serum were issued from the Bacteriological Laboratory at Muktesar in 1911–12 as against 87,000 doses in 1902–03. The good results attained in preventing the spread of the disease and saving life have to a large extent overcome the unwillingness of the people to adopt this method of treatment. Inoculation against other diseases has also made considerable headway. The table below shows the results of preventive inoculation in 1911–12.

Reported Deaths from Contagious Diseases.

Equines.*		Bovines.	
Glanders	289	Rinderpest	82,991
Anthrax	120	Foot-and-mouth disease	15,265
Surra	323	Hæmorrhagic septicæmia	34,864
Other contagious diseases	388	Black quarter	11,462
		Anthrax	15,440
		Other contagious diseases	41,792

* Excluding areas in which horse-breeding is under the Army Remount Department.

Disease.	Number of Outbreaks in which Inoculation was undertaken	Number of Animals that Died uninoculated in Course of Outbreaks.	Number of Animals inoculated.	Number of Animals that Died after Inoculation.
Rinderpest	1,698	25,634	252,115	1,737
Anthrax	12	33	667	—
Black quarter	36	159	2,957	5
Hæmorrhagic septicæmia	283	1,537	29,560	40

A special officer was appointed in 1906 to investigate camel diseases, and especially surra, which is a terrible scourge to these animals. Some success has been attained with curative treatment of surra, though no simple method of general application has been discovered. Of the other diseases that appeared in the returns of the earlier

(The Civil Veterinary Department.)

years of the decade, dourine appeared to have been stamped out, but six deaths were reported in 1911–12. An Act passed in 1910 provides special means of dealing with the disease.

Apart from special measures against outbreaks in particular places, veterinary treatment is supplied in the ordinary course by hospitals and dispensaries and by touring veterinary assistants. The strengthening of the subordinate establishments and the opening of new hospitals and dispensaries during the decade made possible a very large increase in the number of animals treated in this way. The figures in the margin are not altogether complete, but they illustrate the great advance under this head.

—	1901–02.	1911–12.
Veterinary assistants on tour :		
Villages visited - - -	30,677	97,674
Animals treated - - -	156,978	464,736
Hospitals and dispensaries :		
In-patients admitted - -	4,750	27,117
Out-patients treated - -	125,536	555,756

Veterinary Instruction.—Considerable improvements in various directions were made during the decade at the five veterinary colleges. The Madras College, which dates only from 1903, has made good progress. The total number of students under instruction at the end of 1911–12 was 422. The courses last for three years ; of 414 students passed out during the three preceding years, 336 had gone into the service of Government or local bodies, 49 into the service of other bodies or institutions, and 8 into private practice, while 21 were returned as unemployed, including one who had died.

Reports for 1911–12.—Some of the chief points in the provincial reports for 1911–12 may be briefly noticed.

Assam.—The chief feature of the year was an increase in rinderpest, which accounted for 20,600 of the 48,000 deaths from contagious diseases reported ; of 33,000 cattle inoculated, 881 died. The strength of the Department in the new province is small, and success is limited accordingly. It is hoped that the local boards, which are at present mostly willing to employ only one assistant, will soon work up to the standard of two. Little is done as yet in connection with cattle-breeding, but there is a project for establishing a large cattle herd to supply the province. There were only three dispensaries at the close of the year ; over 5,000 villages were visited by touring assistants.

Bengal.—There was a considerable decrease in the mortality from the principal contagious diseases. Outbreaks of disease are being reported more frequently than in the past, and much greater interest is now being taken in this matter, both by members of agricultural associations and by private persons ; but the village *panchayats* have not yet realised the importance of their duties in this connection. The important question of improving the breed of cattle has been engaging the attention of Government for some time, and it is hoped that a suitable scheme for overcoming the difficulties experienced in the past may be devised.

Bihar and Orissa.—Foot and mouth disease was the most prevalent of the contagious cattle diseases. It was in evidence throughout the province, and appears to have caused considerable loss to stock owners in the planting districts, where the attack was severe. Rinderpest was more or less prevalent throughout the province, and hæmorrhagic septicæmia was responsible for many deaths and was widely distributed. Inoculation was more widely resorted to than in former years ; people are beginning to apply for it of their own accord as a protection for their cattle.

United Provinces.—The most noticeable points were a very great decrease in cattle disease of all kinds, a considerable growth of public confidence in the department as exemplified by early reports of disease, and increasing interest in breeding of all kinds, especially perhaps in mule breeding. The bull-rearing farm at Kheri made good progress, and it was expected that the first batch of bulls would be issued to the stud before the end of 1912.

Punjab.—The Department was reported to be growing daily in popularity and usefulness, but there was a difficulty in obtaining suitable recruits. The number of dispensaries was raised to 109, and it was reported that within another year every tahsil in the province would be equipped with a veterinary dispensary. A stationary

veterinary assistant for each tahsil had already been provided, and a touring assistant for each district, with one inspector for every two districts, so that in respect of district work the year marked the close of one period of development, the sanctioned strength of the subordinate staff having been reached. The province was remarkably free from serious disease during the year. The general success of rinderpest inoculation is now accepted in the province, but difficulties were caused by the introduction at the beginning of 1912 of a charge of threepence per head for inoculation.

North-West Frontier Province.—The low figures of contagious disease and mortality were attributed to a very dry and healthy season. There were only three cases of opposition to inoculation in actual outbreaks, but the vaccination of healthy animals in the absence of an outbreak does not appeal to the people. Cattle breeding is very backward; bulls have been from time to time supplied to all the districts, but with little success. Horse and mule breeding, on the other hand, is very popular.

Central Provinces and Berar.—The work of the department expanded considerably, progress in preventive inoculation being especially noticeable. Foot and mouth disease was prevalent throughout the province, and was responsible for an increased number of deaths. Deaths from anthrax, black quarter, and hæmorrhagic septicæmia showed an appreciable decline.

Burma.—There was a decrease from 39,000 to 34,000 in the reported number of deaths of cattle from contagious diseases, rinderpest and foot-and-mouth disease both declining. Nearly 9,000 animals were inoculated for rinderpest, and it is reported that in districts where inoculation has been frequently carried out the villagers appear to have some faith in it. Improvements were being made in the equipment of the Insein School. No breeding operations were in progress. A survey of contagious cattle diseases is being undertaken in accordance with the view of the local Government that in Burma the suppression of disease is of more importance than the improvement of the breed of cattle. The only dispensary is at Insein, but over 21,000 villages were visited by touring assistants.

Madras.—The reported deaths from rinderpest fell from 24,400 to 10,600. The decline was attributed to some extent to the early presence of veterinary assistants at the seats of outbreaks and to the preventive measures adopted by them.

Bombay.—With the exception of black quarter, the figures for attacks of epidemic diseases showed a decline. The most satisfactory feature of the year was the increase in the number of inoculations for rinderpest from 7,745 to 32,573; the popularity of inoculations is beginning to be established. Several owners applied of their own accord during the year to have their cattle protected. Special efforts were made to bring all the members of the Department into closer contact with the country people. The number of veterinary dispensaries was increased from 47 to 50.

Fisheries.

This is perhaps the most appropriate place for a reference to the steps taken during the decade to improve and develope Indian fisheries. Considerable progress has been made in this connection, particularly in Madras and Bengal.

In Madras a small Fisheries Bureau was started in 1907, with Sir Frederick Nicholson, a retired member of the Indian Civil Service who had since his retirement carried out extensive inquiries in regard to fisheries, as Honorary Director. A piscicultural expert was appointed, and a marine assistant, with special charge of pearl fisheries, has since been added to the staff. A fresh-water fish farm has been established, and something has already been done in the way of stocking rivers and other waters. Trout have been completely established in the higher waters of the Nilgiris. An important function of the farm will be the rescuing from rivers and canals of immature fry and their preservation through the dry season. An experiment in the cultivation of edible oysters has so far been a marked success. Two marine fish-farms are being started. The experiments conducted in the manufacture of sardine oil and guano have resulted in establishing the industry on a firm basis, and the number of private factories rose from 2 in 1909 to 45 in 1911. The department has now transferred its attention to the preparation of refined deodorised oil, for which there is an immense and better priced market, and the experiments have shown promising results.

(Fisheries.)

In Bengal systematic efforts to conserve and develope the fisheries on modern and scientific lines began in 1906, when Mr. (now Sir Krishna) Gupta was placed on special duty to inquire into the condition of fisheries in the province and to suggest measures for their improvement. In 1908 a steam trawler with experienced fishermen was sent out from this country to carry out a fishing survey in the Bay of Bengal. The operations, which lasted from June 1908 to December 1909, showed that the Bay will yield an ample supply of fish, and that the catches can be put on the market in good condition. A chart showing the best fishing grounds has been published. Two students, who became on their return assistants in the newly-created Fishery Department, were sent for training to Europe and America, and an expert was appointed as Deputy Director in 1911. Attention has recently been given mainly to fresh-water fisheries, and investigations into the breeding of carp and other fish have been carried out.

In the Punjab a temporary post of Director of Fisheries has recently been created, with a view to the investigation of the possibilities of fisheries in the rivers and canals of the province, and to the taking of measures of protection in order to check the enormous wastage of fish life—and, consequently, of food for the people—that now occurs. It is proposed to provide adequate ladders at weirs on the main rivers which obstruct the free movement of migratory species, to protect spawning grounds, and to take steps to prevent the wholesale destruction of fry and immature fish in the canals during closure. A breeding-pond is also being made. Brown trout have been successfully introduced in some of the hill streams.

In other provinces various steps have been taken. In Burma the Mergui pearl fisheries were examined by experts in 1907. In Bombay the question of improving the Sind oyster beds has been under consideration, and officers on leave in Europe have studied pisciculture and oyster culture. In the Central Provinces the question of stocking the Ramtek tank with superior species of fish has been taken up with the help of the Piscicultural Assistant from Bengal.

Agricultural Loans and Advances.

As has already been remarked, the agriculture of India is, generally speaking, in the hands of small men, and the peasant in India, as in most other agricultural countries, works on borrowed capital. The arrangements generally prevailing hitherto have been summed up in the statement that capital is supplied "in small sums by small capitalists to men of small commercial intelligence." There has been on the one hand excessively wide credit, and on the other excessively dear money, and the agriculture of India has suffered equally from both causes. The measures taken in some parts to curtail the peasant's ability to raise money on his land by placing restrictions on alienation have been referred to in an earlier chapter. The Government have endeavoured also to make available other sources of capital besides the village money-lender, both by lending money themselves, and, in more recent years, by encouraging the peasant to form co-operative credit societies. An account of the great progress made under this last head will be given in the next section of this chapter. Government loans (known as *takavi*) are regulated by the Land Improvement Loans Act of 1883 and the Agriculturists' Loans Act of 1884. The former enactment authorises the grant of loans by local officers, subject to rules laid down by the local Governments, for the purpose of making any improvement, an "improvement" being defined as any work that adds to the letting value of the land. Wells take the first place among such works. Loans are repayable by instalments, and are recoverable generally as if they were arrears of land revenue. The Agriculturists' Loans Act makes similar provisons for advances for other purposes, not specified in the Land Improvement Loans Act, but connected with agricultural objects, including the relief of distress and the purchase of seed and cattle. The rate of interest on Government advances is $6\frac{1}{4}$ per cent. (one anna in the rupee) or less, as compared with 12 to 24 per cent. or more exacted by the village money-lender; but advances are made only for specific purposes connected with agriculture, they entail more formalities than the village loan, and the repayment is enforced with greater rigidity, so that in the past Government loans, though large in the aggregate, have not had any very great influence on the agricultural credit of the country. The table below shows (for financial years) the amounts advanced to cultivators in each year

under both heads, and also the amounts advanced to co-operative credit societies, as stated in the Finance and Revenue Accounts :—

—	Bengal.	Eastern Bengal and Assam.	United Provinces.	Punjab.	North-West Frontier Province.	Central Provinces and Berar.	Burma.	Madras.	Bombay.	Total, including Minor Provinces.
Advances for improvement of land :—	£	£	£	£	£	£	£	£	£	£
Three years, 1901-04	23,409	—	22,093	65,428	9,524	20,852	62	39,631	234,226	454,866
,, ,, 1904-07	29,978	4,389	56,994	35,304	6,197	26,249	902	57,358	222,016	453,529
,, ,, 1907-10	173,282	5,517	821,435	57,048	7,490	135,597	4,083	73,228	168,400	1,454,500
1910-11	7,652	1,720	35,202	12,014	3,373	7,237	762	18,212	62,942	152,760
1911-12	6,613	2,376	50,037	14,409	3,669	8,553	552	21,972	252,513	369,074
Advances for relief of agriculturists and other purposes :—										
Three years, 1901-04	29,226	4,692	21,319	87,259	11,255	239,351	68,036	31,242	590,149	1,085,140
,, ,, 1904-07	157,857	74,057	251,264	118,412	12,634	131,246	139,674	48,109	309,732	1,262,013
,, ,, 1907-10	470,606	87,884	1,648,089	179,844	14,141	512,674	189,441	86,726	359,662	3,559,400
1910-11	25,616	6,770	61,022	12,737	6,759	41,932	62,269	25,291	80,015	324,892
1911-12	12,612	9,866	173,046	41,529	9,292	41,662	64,579	27,221	64,480	449,382
Loans to co-operative credit societies :—										
Three years, 1904-07	760	1,429	1,868	2,772	—	346	2,102	1,612	3,111	14,276
,, ,, 1907-10	2,362	4,010	12,401	4,233	—	173	181	1,662	8,069	33,307
1910-11	553	1,713	639	—	—	16	—	—	3,196	6,190
1911-12	991	934	245	267	—	—	2,163	—	4,260	8,903
Total outstanding, 31st March 1912	177,563	42,755	660,591	147,861	28,354	101,551	79,216	324,683	882,856	2,447,659

In times of famine Government loans are particularly useful, and the traces of the crop-failure of 1907–08 are clearly to be seen in the above figures, especially in those for the United Provinces and the Central Provinces. The important part played by Government advances has been noticed above in the account given of the measures of relief taken in those provinces.

Co-operative Credit Societies.

The co-operative movement in India is a recent development, due to action taken by Government. It has hitherto been concerned almost exclusively with credit societies, though activity in other directions is beginning. The movement is not confined to agriculturists, but it was with a view to their benefit, mainly, that societies were started, and the great bulk of the societies are rural. It may safely be said, also, that no line of advance offers greater possibilities in the way of the improvement of agriculture. The subject may therefore appropriately be dealt with in this chapter.

The possibility of improving the credit of the rural population in India by the establishment of a system of co-operative credit societies had, at the beginning of the period under review, been for some time engaging the attention of the Government of India. The question had previously been taken up independently in some provinces, and in some cases practical steps had been taken. The most striking development of the co-operative principle on indigenous lines had taken place in Madras, where the *nidhis*, described as mutual loan funds, had attained on the whole a very considerable degree of success, in spite of numerous failures due to fraud, ignorance, the unsuitability of the law, and the absence of supervision. There were in 1901 over 200 *nidhis*, with 36,000 members and a subscribed capital of £1,700,000. They found their clients, however, among a more highly educated and advanced class than the mass of the agricultural population, to whose needs their constitution was not well adapted. In other parts of the country the societies that had been started had hardly passed the experimental stage. In the United Provinces steps had been taken in 1900, at the suggestion of the local Government, to establish societies in many districts; in the Punjab a few societies had been formed about 1898 by district officers on their own initiative; and in Bengal several societies had been started, and appeared to have attained some success under the fostering influence of sympathetic officials.

In 1901 a committee was appointed by the Government of India to consider the whole subject in the light of reports from the local Governments and of the experience already gained in the provinces referred to above. The report of the committee was

(Co-operative Credit Societies.)

laid before Parliament.* It was now apparent that no real advance was possible without legislation, the elaborate provisions of the Companies Act being wholly unsuited to societies of the kind in question. Legislation was therefore undertaken with the object, firstly, of taking such societies out of the operation of the general law and substituting provisions specially adapted to their constitution and objects; secondly, of conferring upon them special privileges and facilities, so as to encourage their formation and assist their operations; and, thirdly, as a necessary corollary, of taking precautions against the improper utilisation by speculators and capitalists of privileges not intended for them.

Legislation.—A Co-operative Credit Societies Bill was accordingly introduced in the Governor-General's Legislative Council in October 1903, and passed into law as Act X. of 1904. In view of the wide diversity of conditions in India, and the experimental nature of the measure, simplicity and elasticity were kept in view as cardinal points. Broad principles were laid down, and certain precautions insisted on, subject to which, and to rules to be made by local Governments, in the same spirit, in accordance with local needs, the people were to be left to work out their salvation on their own lines, the function of Government being confined to sympathy, assistance, and advice. The object of the Act, as stated in its preamble, was "to "encourage thrift, self-help, and co-operation among agriculturists, artisans, and "persons of limited means." Local Governments were empowered to appoint provincial registrars of co-operative credit societies, whose duty it would be to scrutinise applications for registration under the Act. Subject to the provision that any association of not less than 10 persons might be registered by the special order of a local Government, the Act laid down that a society should consist of persons residing in the same town or village or the same group of villages, or, subject to the sanction of the registrar, of members of the same tribe, class, or caste. Societies were classed as "rural" or "urban," and it was laid down that four-fifths of the members must be, in the first case, agriculturists, and in the second, non-agriculturists. In the case of rural societies the liability of members was to be unlimited, unless a departure from this rule were specially sanctioned by the local Government; in the case of urban societies, liability might be either limited or unlimited, as might be provided by byelaws or rules made under the Act. Profits, in the case of a rural society, were in the first instance to be carried to a reserve fund, or applied to the reduction of the rate of interest, and a bonus might be distributed only when requirements in these directions had been fully met; urban societies were also to carry at least a quarter of the annual profits to a reserve fund. Loans were to be made only to members, or, subject to the consent of the registrar, to a rural society. Limitations were placed on the interest in a society that might be held by a single member, and on the transfer of shares. Privileges included the exemption of a member's shares or other interests in the capital of a society from attachment for private debts, the grant to societies of a measure of priority over ordinary creditors in enforcing claims on crops, cattle, &c., and provisions for exemption, at the discretion of the Government of India, from income tax, stamp duties, and registration fees. Provision was made for compulsory inspection and audit by the registrar, for compulsory dissolution, subject to appeal to the local Government, and for liquidation under a simple procedure. Finally, wide rule-making powers were conferred upon local Governments.

The development of co-operative societies during the period under review took place under the Act of 1904; but in the last month of the decade the Act was repealed and replaced by the Co-operative Societies Act (Act II.) of 1912, which introduced important changes in the law. Experience had shown that, in spite of the simplicity and elasticity of the earlier Act, there were certain respects in which it was desirable to extend its scope, and some points in regard to which amendment of the detailed provisions was required. The first change made is indicated by the difference between the titles of the two Acts. With the spread of co-operative credit societies, there had arisen in many parts of India a desire to initiate other societies of a co-operative type, having for their aim the production or distribution of commodities and not merely the provision of credit. The new Act accordingly provides for the registration under the Act of any society "which has as its object the promotion of the economic interests of "its members in accordance with co-operative principles," or any society "established "with the object of facilitating the operations of such a society." The statutory

* Cd. 1747 of 1903.

distinction between "rural" and "urban" societies is dropped, the radical differentiation between societies with limited and unlimited liability alone being retained. The principle that agricultural credit societies must generally be constituted on the basis of unlimited liability is retained, but with a view to bringing within the provisions of the Act societies that have grown up and done useful work in some parts of the country, the distribution of profits by "unlimited" societies is allowed in cases where this course is sanctioned by the local Government. The fourth new feature of importance in the Act of 1912 is that it provides for the formation of societies the members of which shall be other co-operative societies. The grouping of societies in this way into unions, and their financing by means of central banks, is an essential feature in European systems, and action on these lines had already been found feasible in most provinces of India. The other changes introduced by the new Act were of less importance and do not call for special notice.

Progress of the Co-operative Movement.—The provincial Registrars appointed after the passing of the Act of 1904 were expected not only to carry out their formal duties under the Act but also to foster in every possible way the growth of the co-operative movement. In the instructions issued by the Government of India, local Governments were invited to select a few districts in each province in which the experiment might be most hopefully tried, and it was pointed out that it would be advisable to start cautiously and to progress gradually. Stress was laid on the necessity of reducing restrictions to a minimum, so that the people might be encouraged (subject to certain necessary safeguards) to work out the problem on their own lines with such guidance and help as could be given to them.

When the Act was under discussion many doubts and fears were expressed. These have in great part been dispelled by subsequent experience. It has been found that the root of the matter does exist in India, and that Indians will co-operate, that unlimited liability is not a bugbear, that societies have succeeded in attracting capital, and that they have not found the absence of a summary procedure an insuperable difficulty in the way of collecting their debts. Making every allowance for the facts that India has been able to profit by the experience gained in other countries, and that the pioneer work has been done by the State and not by individuals, progress has indeed been extraordinarily rapid. Even so, the movement has as yet touched only the fringe of the vast population concerned.

The lines of development have been different in different parts of India, but the same general questions have arisen. It soon became evident that the future of the movement depended on the successful solution of the two connected problems of finance—*i.e.*, the provision of funds—and supervision. The main obstacle to expansion in the earliest stages was the difficulty of attracting outside capital; and, on the other hand, the limits of personal supervision by the registrars were soon reached. The importance of avoiding anything like a general officialising of the co-operative movement has always been kept in view, and development was intended to proceed along lines which would render it possible for societies to provide supervision for themselves. It was recognised that the combination of village societies for the purposes of finance and control was as important as the combination of individuals, and that such combination was intimately connected with the problem of giving them access to the outside money market. Pending the solution of these problems, the policy generally adopted by registrars was one of consolidation rather than extension. The ideal held up was the formation of societies into local and central unions which would not only finance their own societies but also supervise them and encourage the further growth of the movement. So far as finance is concerned, there are now in all provinces a number of "central" societies, which lend to other societies only, and are established for that purpose. As regards supervision, progress has been made in varying degrees in the direction of the ideal above referred to. "Unions" have been formed in many parts, some of which exercise supervisory functions only, while others, such as the "Central Banking Unions" of Bengal, also finance their affiliated societies. It is impossible here to describe the various forms of these main types. A general idea of the stages reached in different provinces may be gathered from the provincial sections below.

In Bombay a new departure was made in 1911 in the form of a central bank—the Bombay Central Co-operative Bank—with a Government guarantee for the interest on its debentures. The bank, which was founded on the initiative of leading local capitalists, lends only to co-operative credit societies, subject to the approval of the registrar, and at a rate of interest which must not exceed 8 per cent. It was registered in October 1911 as an urban society.

(Co-operative Credit Societies.)

A matter to which special attention has been directed is the combination of the efforts of the co-operative and agricultural departments for the development of agriculture. Co-operative work has in many places been brought into contact with that of agricultural associations, seed societies of a co-operative character have been started, and in many other ways the desired combination has already been brought into play.

Satisfactory features of the general development of the co-operative movement in India have been that only a small proportion of the capital of the societies has been advanced by the State, that the purposes to which loans have been applied have been almost entirely productive, and that loans, generally speaking, have been punctually repaid. The rates of interest charged vary, but are considerably lower than those charged by local money-lenders; it is estimated that, at a low computation, the agriculturists of India are saved £100,000 in interest charges for every £1,000,000 lent out by co-operative societies.

The provincial Registrars have hitherto been officials, generally members of the Indian Civil Service; but, as will be gathered from what has already been said, the part played by the State has been confined, as far as possible, to the encouragement of societies in their initial stages. Besides the Registrars, a staff of inspectors, auditors, and clerks, varying in strength in the different provinces, is entertained by Government, and the latest Conference of Registrars expressed the view that it is undesirable at present to relax the Government control over the auditing and inspecting staff. But progress has been made, as has already been noticed, in the decentralisation of supervisory functions, and the Government staff is already outnumbered in the United Provinces and the Central Provinces by the audit and controlling staff entertained by the societies themselves.

The societies registered under the Act have hitherto been classed as "central," "urban," and "rural," the first class including those societies that lend to other societies only.

The table below gives a general view of the progress made since the Act of 1904 came into force. The figures are those for registered societies, and include, in years previous to 1911–12, those for the native state of Mysore, in which (as also in Baroda) co-operative credit societies have been developed under an enactment similar to that in force in British India. Full figures for 1904–05 are not available.

—	1904–05.	1905–06.	1906–07.*	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.‡
Number of societies at end of year :—								
Central	—	9	14	7	15	32	60	120
Urban	6	37	89	149	227	321	415	495
Rural	35	237	740	1,201	1,766	3,145	4,957	7,562
Total	41†	283†	843	1,357	2,008	3,498	5,432	8,177
Number of members	—	28,629	90,844	149,160	184,889	230,698	314,101	403,318
Working capital at end of year :—	£	£	£	£	£	£	£	£
Loans from private persons	—	9,369	43,740	82,900	166,254	232,179	356,755	589,318
Loans from other societies	—	—	16,028	38,984	106,441	201,007	395,714	736,102
Share capital	—	8,747	37,054	62,395	98,483	153,889	226,072	350,536
Deposits by members	—	8,262	38,402	61,301	107,868	168,888	284,673	433,847
State aid	643	4,677	18,982	43,454	45,743	48,118	57,165	62,311
Reserve	—	493	3,906	5,237	12,885	22,430	37,391	66,164
Total	3,608	31,548	158,112	294,272	537,674	826,512	1,357,772	2,238,277
Expenditure during year :—								
Loans repaid to private persons	—	1,357	10,079	26,798	94,022	106,950	129,067‡	310,278
Loans issued to members	—	22,696	158,931	246,201	399,995	530,160	797,655‡	1,198,068
Purchase of raw materials and stores	—	6,754	21,045	26,044	44,959	50,355	44,580‡	63,765
Profits	—	1,277	7,508	12,061	21,751	31,460	46,195‡	71,816
Total	—	32,084	197,563	311,104	560,726	718,926	1,017,497‡	1,643,928

* For a period of 15 months. Previous years end on 31st March, subsequent years, in most cases, on 30th June.

† There were at the end of 1904-05 a considerable number of societies at work, especially in the United Provinces, that had not been formally registered; at the end of 1905–06 there were some 200 additional societies, that either were not working actively or had not been registered.

‡ Excluding Mysore.

The apparent decrease in central societies in 1907–08 was due to a change in classification in the United Provinces.

The next table, which shows the distribution of societies by provinces at the end of 1911–12, gives also some further information as to the development of the three classes of societies :—

	Central.			Urban.			Rural.		
	No. of Societies.	Total Member-ship.	Working Capital.	No. of Societies.	Total Member-ship.	Working Capital.	No. of Societies.	Total Member-ship.	Working Capital.
			£			£			£
Madras - - -	9	643	208,487	47	13,527	48,864	916	51,986	240,231
Bombay‡ - -	9	3,611	83,192	75	6,561	34,260	284	19,247	96,475
Bengal - - -	7	236	26,050	61	9,557	55,677	875	28,776	98,118
Bihar and Orissa -	8	414	15,659	39	1,725	3,968	491	25,482	40,714
United Provinces -	31	2,329	134,802	174	28,459	161,895	1,741	68,981	182,153
Punjab - - -	26	1,274	105,200	26	2,137	7,480	1,717	89,758	375,448
Burma - - -	3	1,129	93,185	37	2,150	26,921	691	16,821	123,469
Assam - - -	1	74	6,073	16	1,829	12,838	125	7,855	13,706
C. Prov. and Berar	25	1,468	37,610	20	1,152	5,383	540	9,516	25,246
Coorg - - -	—	—	—	—	—	—	22	2,179	5,253
Ajmer - - -	1	183	14,007	—	—	—	160	4,259	14,463
Mysore§ - -	*1*	*42*	*2,844*	*47*	*6,801*	*17,838*	*63*	*2,200*	*3,560*
Total, 1912† - -	120	11,361	718,266	405	67,097	357,286	7,562	324,860	1,215,271
„ 1911 - -	60	5,724	334,431	415	69,399	309,425	4,957	238,978	734,591
„ 1910 - -	32	3,740	157,122	321	61,398	244,906	3,145	165,560	443,603
„ 1909 - -	15	1,194	67,140	227	66,544	218,258	1,766	117,151	272,450
„ 1908 - -	7	230	15,454	149	55,525	133,939	1,201	93,173	144,408
„ 1907 - -	14	2,761	*	89	33,599	*	743	54,983	*
„ 1906 - -	9	1,745	*	37	5,914	*	237	20,970	*

* Figures not available. † Excluding Mysore.

‡ Excluding Sind, where there were in 1912 seven societies, with 624 members and a working capital of £1,233.

§ Figures for 1911. Details for 1912 are not available, but during the last year the total number of societies rose to 208, with 13,148 members, and a working capital of £45,021. In Baroda there were at the end of the decade 122 societies, with 2,815 members, and a working capital of over £13,000.

Note.—The figures do not in all cases agree exactly with those in the preceding table, which are taken from a different source.

No figures are given above for the North-West Frontier Province, where the co-operative movement has as yet made little progress. There were in 1912 three co-operative credit societies in the province, with 239 members, and a working capital of £200. Since the end of the period under review it has been decided that none of the societies was fulfilling its ostensible purposes, and steps have been taken for their liquidation. The Act has not as yet been applied in Baluchistan.

As the figures in the margin show, most of the central societies, and nearly half of the urban societies, are on a basis of limited liability. Practically all of the rural societies, on the other hand, are "unlimited." The principle of unlimited liability, when it is understood, has no terror for the ryot, who has long been accustomed to it in his family relationships, while the principle of limited liability is relatively unfamiliar. Unlimited liability must naturally be accompanied, as it is under the Act, by power to exclude from membership persons in whom members have no confidence.

	Kinds of Societies, 1912.			
	Cash.		Other.	
	Limited Liability.	Unlimited Liability.	Limited Liability.	Unlimited Liability.
Central -	98	22	—	—
Urban -	213	260	18	4
Rural -	24	7,486	—	52

Reports for 1911–12.—*Assam.*—Urban societies increased from 13 to 16—the success of several town banks have made them popular—and rural societies from 100 to 125. More rural societies could have been organised, but those existing already suffered from insufficient supervision, and it was considered advisable to proceed slowly until some progress had been made in the formation of unions. The one existing union had not proved a success. There is one central bank—the Pioneer Bank at Shillong. The rate of interest charged by rural societies was in most cases 12½ per cent., 6 per cent. being allowed on deposits. They borrow from

central and urban banks at 9 per cent. Established urban banks can command as much capital in the shape of deposits from non-members as they require; rural societies have not yet gained the confidence of the general public, but it is expected that deposits will soon be attracted. There has never been any opposition to the co-operative movement in Assam, but little general interest has been taken in it.

Bengal.—Central societies increased from 5 to 7, urban societies from 47 to 61, and rural societies from 666 to 875. Further progress in the direction of consolidation, by the formation of more central unions, was regarded as a matter calling for special attention. It was reported that many of the urban societies were but little imbued with the true co-operative spirit, and that some of them were in danger of succumbing to the tendency to become mere joint-stock associations paying a high dividend. The question of framing rules, under the new Act, fixing the maximum rate of dividend was under consideration. In rural areas there was steady progress; management was on the whole satisfactory, and the co-operative spirit was reported to be growing steadily. A third of the loans taken by members of rural societies were for productive purposes, and nearly a half for repayment of debts, the amount borrowed for social ceremonies, such as marriages, &c., being less than 5 per cent. of the total The reports contain indications that the rural societies are influencing their members in directions other than those that are purely economic. A decrease in litigation in one district is attributed to the establishment of a society. Monthly contributions to village schools are becoming common in some parts, and members display an eagerness to be instructed in such subjects as sanitation and agriculture. One society considered the question of taking measures to deal with the evils of cigarette smoking. Experiments in forms of co-operation other than those relating to credit are not yet numerous, the most interesting being a scheme for the joint purchase of bonemeal for use as manure—a good instance of the manner in which the Agricultural and Co-operative departments can work together for the advantage of the peasantry.

Bihar and Orissa.—Central societies increased from 4 to 8, urban societies from 32 to 39, and rural societies from 389 to 491. There was no outstanding feature of development to record. Gradual, safe extension, and simultaneous consolidation and combination of societies, was the line followed. Progress was steady and not unsatisfactory. Administration has improved; societies are more adequately financed than formerly; management of the individual societies is, generally speaking, sound, and the supervision exercised by the central societies effective. Rapid progress must await the awakening of the people generally to the importance of the movement, of which there appears to be no sign at present.

The central societies are "banking unions," some admitting societies only as shareholders, others including also, as preference shareholders, selected individuals who provide an element of business management. The "central banking unions" passed through their second year of trial successfully on the whole, and the suitability of the general lines adopted appears to have been established. They not only finance societies, but organise them and control them generally.

Among the aboriginals of Chota Nagpur, where experience has shown that the usual lines of development are impossible, and that small village societies cannot be trusted to manage their own affairs in even reasonable independence, considerable progress has been made on special lines with the help of missionaries. A trading society, not yet registered, organised by the Roman Catholic Mission in Chota Nagpur, was in 1912 the only representative of non-credit co-operation in the new province.

United Provinces.—Taking central societies and district banks (which lend to individuals as well as to societies) together, their numbers rose from 26 to 39. Urban societies (excluding district banks) increased from 124 to 166, and rural societies from 1,108 to 1,741. The reports bear testimony not only to the rapidity of growth, but also to the solidity of the progress hitherto achieved. The most noteworthy developments of the year were concerned with internal organisation. The central and district banks showed a readiness and ability to take the burden of responsibility for supervision, and increased their staff of men trained by the officers of the department. Further, societies are being gradually organised into local groups, whose accounts are in charge of a paid secretary controlled by the financing agencies' staff. Another important feature is the incipient growth of central banking unions within the district but outside the larger district banks. Such a development is inevitable as providing a link intermediate between the remoter village societies and the banks at headquarters.

The larger banks have now successfully associated themselves with the joint-stock banks of the province. In co-operation for purposes other than credit some progress is evident. As in other provinces, there are references to the social and moral results following in the train of co-operation. The movement is reported to have had an appreciable effect in creating solidarity of feeling and a neighbourly spirit, and in providing a nucleus of natural authority to which village disputes can be referred, and which may be invoked to justify thrift on occasions where custom demands extravagance.

Punjab.—"Central banks," with limited liability, increased from 8 to 12; "unions," with unlimited liability, which were held not to be registrable under the old Act, from 1 to 14, urban societies from 12 to 26, and rural societies from 1,074 to 1,717. There was thus great expansion, a satisfactory feature of which was that it was accompanied by only a trifling increase in the staff paid by Government. The problem of arranging for the custody of the portion of the rural working capital not out on loan has now arisen. An effort was made during the year to start artisan societies, principally among weavers, and 14 such were registered. The difficulties are greater than in the case of agricultural societies, inasmuch as the weaver is much more down-trodden, and consequently more suspicious and less enterprising. The movement extended to two regiments of the Native Army, and the regimental *bania* of one received notice to quit. Practically all the rural societies in the Punjab have a share capital, subscribed by members in instalments. Loans are chiefly for payment of old debts, purchase of cattle, and payment of land revenue. A proposal from the Jullundur village banks to make a joint contribution of 10 per cent. of their profits to form an educational fund for the benefit of their children is interesting as showing what a stimulating effect the banks are having on their members' minds.

Central Provinces and Berar.—"Central banks," which are organising and financing institutions, educating and supervising as well as making a reasonable profit for their shareholders, increased from 8 to 20, and rural societies from 280 to 540. A Provincial Co-operative Bank and 12 industrial societies, the latter with unlimited liability, were established during the year. The Provincial Bank, the most important new departure of the year, was successfully started with a capital of 33,000*l.*, and should do much not only to finance the Central banks and bring them into touch with the money market, but also to advance, through them, the cause of co-operation in general. Rapid though the growth of the movement was during the year, the local Government were satisfied that it was unforced, and was, moreover, subjected to careful pruning and control. The year was one not only of quick expansion, but also of steady spadework and consolidation. Unwieldy societies were reduced in size, weakly societies reorganised or weeded out, and undesirable members eliminated. The reserve funds rose from 1,300*l.* to 2,300*l.*; their further enlargement is regarded as one of the most pressing needs for the future. Illiteracy is an obstacle to the progress of the movement in rural areas. The case is reported of a "secretary" whose "accounts" (which, it should be added, proved to be accurate) consisted merely of marks and scratches on the wall of his house. The Provincial Bank lends to central banks at 7 per cent., central banks to rural and industrial societies at 9 per cent., and rural societies to their members at 12 per cent.

In Berar, where the general progress made in previous years had not been satisfactory, the year 1911–12 witnessed a thorough reorganisation: new societies were constituted, and careful scrutiny of the affairs of existing societies did much towards giving the co-operative movement a genuine start.

The popular attitude towards co-operation continued to be friendly and encouraging, and many new names were added during the year to the list of unofficial workers. Cases are reported in which petty money-lenders have been forced to turn their energies into fresh channels and to cease to look to exorbitant interest as a main source of income.

Burma.—Central societies increased from 2 to 3, "unions" from 24 to 43, urban credit societies from 27 to 37, and rural credit societies from 444 to 691. Apart from the credit societies, cattle insurance societies increased from 6 to 23, and the year was marked by a new departure in the formation of seven co-operative paddy sale societies. The registrar reported, nevertheless, that the brake had as usual been applied and the policy of concentration and consolidation followed. Of the three central societies, the Upper Burma Central Bank was the most important, being

practically the provincial central bank. At the end of 1911–12 the 43 unions, which do not exercise banking functions, but are federations for the purposes of inspection, control, and mutual guarantee, included 486 of the rural societies. The latter generally borrowed and lent at 9 per cent. and 15 per cent. respectively. Public interest in co-operation as a growing movement has been maintained, and the general attitude towards it is decidedly sympathetic, though the money-lending class in some instances has been antagonistic.

Madras.—Central societies increased from 5 to 6, urban societies from 30 to 47, rural societies from 560 to 916, and "unions" from 1 to 3. There was a general tendency throughout the presidency to ask for more credit societies. Money is now found with ease, and the need for Government subsidies has passed. A district bank which was also a district union, inasmuch as its object was both to finance and to control the societies in the district, was for the first time registered during the year. The three unions, which were formed simply to control and supervise the member-societies, and not to finance them, included only 60 societies, 87 more being included in "groups," which are embryonic "unions." Nearly half the amount lent by rural societies was for the discharge of prior debt. Four societies were registered whose object was to secure the Badagas of the Nilgiri Hills from their bondage to the Lubbais. A few non-credit societies were registered. It is stated that the public is keenly alive to the progress of the co-operative movement.

Bombay.—Central societies increased from 7 to 9, urban societies from 62 to 75, and rural societies from 182 to 284. The outstanding feature of the year was the establishment of the Bombay Central Co-operative Bank, referred to above. This inaugurated a fundamental change in the method of financing the business of agriculture in Bombay, giving the small cultivator access, through the Bank, to the general money market. The anticipation is expressed that the more respectable money-lenders will follow the example of the Central Bank and lend money at reasonable rates of interest to the co-operative societies. There are, in addition to the Central Bank, a number of district banks. The need for district unions, which would undertake the supervision of affiliated societies, is beginning to be felt, and steps have been taken in one district to start a union. The object of improving the economic position of weavers has been kept in view, though progress has been very slow. The number of societies confining their dealings to weavers increased during the year from 6 to 10. Several urban societies also include a number of weavers among their members. The number of registered societies in Sind increased during the year from 4 to 7.

CHAPTER XIV.

FORESTS.

Something has already been said, in the chapter on Finance, of the Indian forests as a source of revenue of great and growing importance. A full account of their value to the State would need to take a much broader view. They play a part of the first importance, as "the head-works of Nature's irrigation scheme," in regulating the water supply; they annually provide for countless herds grazing, which assumes a special value in years of drought, when it renders material assistance in saving from starvation the cattle upon which the agriculture of the country depends; and they afford to neighbouring villagers a ready supply of material for house building and thatching, of fuel, by the use of which the burning of manure may be avoided, and of minor forest products, which add substantially to the comforts of their life. The forests are of great importance from the point of view of supplying some of the primary needs of the agricultural community, quite apart from the question of the production of big timber. The policy adopted in regard to the State forests is based upon the principle that they should be administered for the public benefit; they are worked, therefore, with a view to combining all reasonable facilities for their use by the public with the protection necessary for their preservation as sources of fuel and timber, and as agencies by means of which rainfall water may be stored in the soil and given off subsequently by gentle flow. In other words, the objects in view are, firstly, the welfare of the community as a whole; secondly, the benefit of the individuals in the more immediate vicinity of the forests; and, lastly, the utilisation to the utmost of such products as the forests supply, in the interest of the State revenue.

This chapter deals for the most part only with State forests, *i.e.*, lands administered as forests by the Forest Department under legal enactments dealing with forests for the time being in force. There are in British India large forest areas outside the direct control of the Forest Department which are managed by district officers, local boards or municipalities, or private owners. There are also considerable areas of forest in the native states. The total area shown in the returns of State forests has steadily increased. In 1901–02 it was 216,879 square miles; in 1911–12 the area had increased to 242,935 square miles. It should be explained that these figures do not represent the wooded area; in some provinces the figures of "unclassed State forests" include all unoccupied waste, and much of this is entirely devoid of trees. The proportion of forest area to total area in the different provinces varied in 1911–12 from less than 2 per cent. in the North-West Frontier Province and British Baluchistan to over 80 per cent. in Burma. Generally it may be said that the denser the population and the more urgent the demand for the local advantages that forests confer, the less the extent to which those advantages can be enjoyed. This position is the natural result of the increase in population and the wasteful practices of former generations. To burn the forest for the benefit of the cattle of nomadic tribes, to clear it for the purpose of temporary tillage, to destroy it for the creation of permanent cultivation, has been the rule in past centuries, and, indeed, still is wherever Government has not intervened. In many localities the extension of forests and their management continue to depend to some extent on the treatment and requirements of forest tribes very low in the scale of civilisation, such as the Chins and Nagas of the wild hill forests of Burma and Assam, and the even more primitive Jarawas of the Andaman Islands. In the distant forests of the far east of India such tribes still practise shifting cultivation, while in the civilised districts of the west the cultivator and the trader eagerly accept timber of species elsewhere despised.

The history of forest conservancy in most parts of India does not go back beyond the middle of the last century. It was not until 1864 that the first Inspector-General of Forests was appointed and the development of a regularly organised Forest Department began. The first Indian Forest Act was passed in 1865. Forest administration in most provinces is now regulated by the Indian Forest Act of 1878. Separate Acts for Burma and Madras were passed a few years later. Assam, British Baluchistan, and some smaller areas also have Forest Regulations of their own. The basis on which Indian forest law proceeds is that all uncultivated tracts in which

(Forests.)

private rights have not been acquired, either by the individual or by a local community, are the property of the State. Where private rights or privileges have grown up in forests the chief proprietary right in which is vested in the State, the Acts above referred to give Government the necessary powers for dealing with them. Provision is also made for the exercise of some measure of control over forests that are not State property.

The forests under the direct control of the State are departmentally classified as "reserved," "protected," and "unclassed" or "public" forest land. The reserves are forests intended to be maintained permanently for the supply of timber, fuel, and other produce, or for the protection of the water supply or other similar purposes. The protected forests may be either in a state of transition to reserves, or intended to remain permanently in the second class; in the former case it has been found necessary to prohibit within the areas in question certain acts harmful to the forest until after careful examination a decision as to whether more stringent rules should be enforced is possible; in the latter, the object in view has been to provide for the more beneficial exercise of rights by local communities. In the reserved forests strict rules are enforced; in the protected forests the control exercised is less strict. In the case of the latter, the local Government has power to close a portion for a limited period, to reserve particular trees or classes of trees, and to prohibit or regulate the removal of forest produce, the clearing of land, and the pasturing of cattle. The main difference between the two classes of forests has been summed up in the statement that in the reserved forest everything is an offence that is not permitted, while in the protected forest nothing is an offence that is not prohibited. The unclassed or public forest lands are given over with even fewer restrictions (in some cases to the extent of exemption from the operation of forest law) for the use of the public. The largest areas of unclassed forest occur, where the population is scantiest, in Burma and Assam. In Burma exploration is still incomplete, and each year brings an addition of hundreds of square miles to the reserves.

In those areas to which the Act of 1878 applies two special classes of forest are recognised, the reserved and the protected, and in unclassed forests no forest law is operative. In the Madras and Burma Acts and the Assam Regulation, on the other hand, only one class of permanent State forest, the reserved, is specially dealt with, but power is given to extend a certain amount of legal protection to all other forest lands. The vast extent of the land under forest control, the facts that forest management, however well justified, involves immediate restrictions on the previous rights and practices of the local population, and that forest lands include jungles and grazing grounds intermingled with cultivated areas, all bring the Forest Department into intimate connection with the life of the people. When it is desired to create a forest reserve, three months' notice of the intention is given to all likely to be interested in the proceedings, and after the expiration of that period a local inquiry is instituted by a specially deputed Revenue official, styled the Forest Settlement Officer. All claims advanced to exercise rights within the area to be reserved are duly considered and, if acknowledged, recorded in detail in the manner prescribed by law. After the settlement record is complete, a period for the presentation of appeals to a competent court follows; when these have been decided, and when local rights have been confirmed or brought up, the reserve is formally constituted by the local Government. For the creation of protected forests a somewhat similar procedure, but in much simpler form, is adopted. The regulations for unclassed forest lands are usually framed with a view to permitting free, but not wasteful, utilisation of produce for domestic use, and to taxing, by the imposition of a royalty, all articles removed for trade purposes.

After the forest estate is constituted, it is made over to the Forest Department; the boundaries are permanently demarcated and a detailed survey is made, after which a "working plan" may be prepared. This plan regulates the amount and removal of out-turn, the measures to be taken in regard to sowing, planting, and thinning, and for protection from fire and cattle, and the construction of roads, bridges, and buildings. Working plans are generally compiled for periods of 20 to 40 years. As will be seen from the figures given below, the total area so far brought under regular working plans of this description is only about half the area of reserved forests alone.

Forest administration in each province is controlled by the local Government, subject to the general supervision of the Government of India, to whom an Inspector-General of Forests is attached. The forest areas are divided into "circles," each

under a Conservator. In Burma and the Central Provinces there are also Chief Conservators, one in each province. These appointments date from 1905 and 1906. "Divisions," corresponding as far as may be to revenue districts, are held in charge by officers of the Imperial or Provincial Service, and "ranges" and "beats" by members of the Subordinate Service. Forest operations are subject to the control of the local executive officers in matters that directly affect the people. The officers of the Imperial Service are recruited in England. Formerly they went through a special course of training at the Royal Indian Engineering College, Coopers Hill; since 1906, when the college was closed, they have been trained at Oxford, or at one of the other universities approved for the purpose. The Provincial Service is recruited generally from among those members of the Subordinate Service who have obtained the higher certificate of the Imperial Forest College at Dehra Dun. Considerable progress was made during the decade in respect of the provision of forest education in India. The Imperial Forest School at Dehra Dun was raised to the status of a college in 1906, and various improvements were introduced. At the same time an Imperial Research Institute was established as part of the same institution, a staff of experts, chiefly forest officers, being appointed to carry out research in sylviculture and forest working plans, and in zoology, chemistry, botany, and economics with special reference to forestry. A Forest Entomologist, it may be mentioned, had been appointed in 1901; the appointment was an important step in advance, as up to that date little had been done in regard to the investigation of the damage caused to the forests by insects. As a consequence of the abolition of the vernacular course at Dehra Dun, the duty of training subordinate officers below the rank of ranger devolved on local Governments, and steps were taken to provide provincial institutions for their instruction. The separate forest school established in Burma in 1899 was also reconstituted in 1906, provision being made for an English course as well as a vernacular one.

Extent and Nature of Forests.—The table below shows the areas of forest land under the management of the Forest Department, including leased forests, in each province at the beginning and end of the decade:—

	Forest Area, 1902.			Forest Area, 1912.			Proportion of Forest Area to Total Area of Province, 1912.	Proportion of Forest Area under Working Plans, 1912.
	Reserved.	Protected.	Unclassed State.	Reserved.	Protected.	Unclassed State.		
	Sq. Miles.	Sq. Miles.	Sq. Miles.	Sq. Miles.	Sq. Miles.	Sq. Miles.	Per Cent.	Per Cent.
Bengal	5,964	3,582	4,033	4,663	1,711	4,030	13·3	45
Bihar and Orissa	—	—	—	1,719	1,057	—	3·3	52
Assam	3,707	—	17,865	4,321	—	18,403	42·9	5
United Provinces	4,053	30	43	4,117	30	29	3·9	97
Punjab	2,314	4,888	2,262	2,208	5,203	1,312	9·0	46
N.W. Frontier Province	234	—	—	236	—	—	1·8	100
Central Provinces and Berar	22,732	—	130	21,038	—	—	21·1	46
Burma	18,606	—	89,220	26,135	—	111,218	83·5	6
British Baluchistan	203	—	—	313	—	472	1·7	—
Coorg	238	127	267	520	—	—	32·9	25
Ajmer-Merwara	139	—	10	*142*	—	—	*5·1*	*99**
Andamans	156	—	1,795	156	—	2,013	69·0	15
Madras	17,154	—	2,412	18,601	—	838	13·7	41
Bombay	13,924	791	—	11,979	471	—	10·1	52
Total	89,424	9,418	118,037	96,148	8,472	138,315	23·9	20

* Figures for 1911.

Of the areas of reserved or protected forest excluded as not being under the management of the Forest Department, the most important in 1912 were 9,069 square miles of district protected forests in the United Provinces, 2,592 square miles of forests in charge of the Revenue Department in Bombay, and 927 square miles of protected forest in Bihar and Orissa. Forests owned by private individuals in British India and, ordinarily speaking, exempt from State interference, are supposed according to a recent estimate to extend to at least 77,000 square miles, not all necessarily covered with tree growth.

Except in Burma and Assam, there was no marked increase in the total area of reserved forests during the decade. In several provinces the area shows some diminution.

(Forests.)

In the United Provinces, where the area of reserved forest is small, the local Government took an important step in 1912 by initiating a systematic survey of the possibilities of afforestation, with the main object of establishing fuel and fodder reserves more adequate to meet the rapidly expanding demand accompanying agricultural and industrial development.

At the end of the decade, working plans had been completed and sanctioned for about 47,600 square miles, and were in process of compilation for 14,300 square miles. For a large part of the outstanding area in Assam, and for smaller areas in some other provinces, working plans are not at present required. At the beginning of the decade the area managed under regular working plans was about 29,500 square miles.

It is impossible to deal, except very briefly, with the composition of the forest flora. There are many hundreds of species of trees in the Indian forests, and their distribution is determined, generally speaking, rather by rainfall and elevation than by latitude and longitude. The most important by far of the main classes into which the forests may be divided are the Deciduous forests that occur throughout the length and breadth of the peninsula from the foot of the Himalayas southwards, and again in Burma. Among the valuable timber trees of these regions are the teak, characteristic of the drier parts of Burma and the southern half of India, the sal (*Shorea robusta*), characteristic of parts of the northern half of India, the ironwood (*Xylia dolabriformis*), especially in the central parts of India and in Burma, the red sanders (*Pterocarpus santalinus*) and sandal-wood (*Santalum album*), in different areas in the south, the blackwood or East Indian rosewood (*Dalbergia latifolia*), and species of ebony. The padouk (*Pterocarpus dalbergioides* and *indicus*), which yields a wood stronger, heavier, and more handsome than teak, is found in the Andamans, and also in Burma. Next in importance to the Deciduous forests are those thriving in moister climates, chiefly on the west coast, in Burma, in the Andamans, and in the sub-Himalayan tracts, and known as Evergreen. Many of the trees of the deciduous regions occur here also. In the west coast regions, as well as in other parts, the fruits of *Terminalia Chebula*, known as myrobalams, are collected and exported in large quantities, for use in dyeing and tanning, and in medicine. The Dry forests of Rajputana and the Punjab produce little of value. The Alpine forests of Northern India, Assam, and Burma include various conifers, oaks, birches, chestnuts, and other trees, the Deodar (*Cedrus Deodara*) forming valuable forests in the Western Himalayas.

Forest Protection.—An important branch of forest work consists in the protection of the forests from damage at the hands of the people, by cattle, or by forest fires. The figures in the margin show the results of the application of forest law and regulations in the first and last year of the decade. The most noticeable point is that the majority of cases are not brought into the courts, the forest officers being empowered to compound minor offences for cash payments if the offenders so desire. The number of cases brought into the courts showed a downward tendency during the period under review, while the number compounded increased. The proportion of convictions in the cases brought before the courts remains fairly steady at about 86 per cent. About half of the total number of offences come under the head of illegal felling of timber or removal of produce, and the bulk of the remainder under that of illicit grazing. The reported cases in which the offenders

	Number of Cases disposed of by the Courts.		Number of Cases compounded.	
	1901–02.	1911–12.	1901–02.	1911–12.
Bengal	240	195	2,293	1,312
Bihar and Orissa	—	224	—	1,178
Assam	99	219	227	440
United Provinces	129	291	613	2,113
Punjab	1,171	812	2,628	8,080
North-West Frontier Province	41	170	455	1,425
Central Provinces and Berar	309	264	4,558	8,067
Burma	586	894	1,556	2,897
Coorg	8	7	36	33
Ajmer-Merwara	396	*13*	313	*392**
Baluchistan	75	22	140	30
Andamans	3	4	—	—
Madras	7,082	5,363	13,827	19,456
Bombay	1,462	1,039	7,827	16,542
Total	11,601	9,517	34,473	61,965

* Figures for 1910–11.

remained undetected (about 7,400, including a large proportion of the cases of injury to forest by fire) brought the total of new cases in 1911–12 up to about 80,000, or one offence for every 3 square miles of area, a figure which goes to show that forest law does not press hardly on the people. There was, during the period under review, a noticeable increase in the total number of offences in some provinces. In the Punjab, where it was most marked, it was attributed to the continued pressure that a growing agricultural and pastoral population is bound to exercise on the building, fuel, and grazing resources of the province; this was accentuated in 1911–12 by a general scarcity of fodder due to the failure of the monsoon, and the number of offences increased by over 1,200, though the forests were thrown open to grazing as far as possible. The increase in Bombay appears to be due partly to the exclusion from "compounded cases" in the earlier year of cases dealt with by simple warnings. As regards animals, grazing is inimical, and browsing fatal, to forest regeneration, and the same area cannot simultaneously provide unrestricted grazing and a normal out-turn of timber. The difficulty that arises where both grazing and timber are required is generally met by the alternate and periodical opening and closing to cattle of fixed areas. As a rule the residents in forest districts are liberally provided with pasturage in State forests, in some cases to such an extent as to make the production of timber a matter of secondary importance. The figures for 1911–12 given below show that a large proportion of the total forest area is open to all animals, and that the number of animals allowed to feed is very great. Browsing animals—camels, goats, and sheep—are subject to a larger measure of exclusion than others. Some of the areas included in the table were closed for a part of the year only. In Burma, where a large area was closed, cattle are few and vast tracts of waste land are still available outside reserves. Of the total number of animals, a quarter, roughly speaking, are grazed free, and the remainder on payment of either full or privileged rates.

	Total Forest Area.	Area closed to all Animals.	Area closed to Browsers only.	Animals grazed.				Proportion of Reserved Forest under Fire Protection.
				Buffaloes, Cows, and Bullocks.	Goats and Sheep.	Camels.	Other Animals.	
	Sq. Miles.	Sq. Miles.	Sq. Miles.					Per Cent.
Bengal*	10,475	5,487	218	124,475	599	—	65	15
Bihar and Orissa*	3,702	1,422	746	312,190	38,238	—	500	94
Assam	22,725	3,948	197	541,930	82,676	—	1,427	32
United Provinces	4,176	2,302	665	606,023	239,314	1,168	12,700	80
Punjab	8,723	779	665	1,020,814	1,871,096	14,281	181,831	45
N.W. Frontier Province	236	51	138	59,208	285	—	301	36
Central Provinces and Berar	21,038	3,974	9,405	3,767,863	626,091	91	10,204	53
Burma†	137,353	24,819	224	328,408	2,651	50	2,147	26
Madras	19,439	3,044	294‡	1,858,135	1,759,014	—	641	81
Bombay*	15,066	2,373	9,401	2,206,118	215,902	1,897	20,622	82

* Including reserved and protected forests not under the Forest Department.
† Exclusive of cattle grazed in the unclassed forests, for which no figures are available.
‡ 16,256 square miles closed to goats only.

The number of animals grazed in the Punjab in 1911–12 was unusually high, but it was noted in previous years that the problem of providing adequate grazing was becoming urgent in that province, where the increase of irrigation and the contraction of grazing waste have been accompanied by a rush of prosperity to people whose only outlets for the display of wealth are jewellery and cattle.

The table shows also the proportion of forest in which special measures of protection against fire, besides the enforcement of the law on the subject, are in force. This branch of the forest officer's duties is one of the most important and arduous; the destruction of forest by fire for various purposes is in accordance with local custom, and, apart from deliberate incendiarism, the thoughtlessness and ignorance of the people have to be reckoned with, as well as accidents in the ordinary sense. The system of fire protection consists in clearing and maintaining fire lines, on which all vegetation is cut and burnt, and in enforcing simple rules by means of a staff of patrols who prevent, except under certain restrictions, the kindling or carrying of fire. The total protected area increased during the decade from about 35,000 to about 52,000 square miles. Much of the forest area is not in need of special protection,

(Forests.)

The degree of success attained varies from year to year and from province to province; the proportion of the protected area overrun by fire, taking the forests as a whole, was in most years of the decade about 5 or 6 per cent. The highest figure, 10·7 per cent., was recorded in 1902–03, when nearly a quarter of the protected area in Burma was burnt.

Sylviculture.—It is not necessary to refer here to the measures taken by the Forest Department to foster natural regeneration, or to the cultural operations undertaken for the good of the growing stock.

The areas under the management of the Forest Department being so extensive, the amount of artificial re-stocking that can be done must be comparatively small, and the forester must rely almost entirely on natural reproduction for the regeneration of the forests.

Artificial plantations in the forests of India extended in June 1911 over some 146,000 acres. More than a half of this total was in Burma, where the plantations consist mostly of those described as "*taungya*," where the practice of shifting cultivation is permitted, provided that teak is sown with the field crops. Mention may be made in this connection of some of the numerous experiments with new species made in various parts of India. Special attention has been given in recent years to rubber-producing plants. The experiments carried out by the Forest Department have shown that Para rubber (*Hevea brasiliensis*) can be successfully grown in parts of Burma, and *Ficus elastica* in Assam, but no great success has so far attended the efforts to grow these and other rubber-producing species in other parts of India. The Mergui rubber plantation, which at the beginning of the decade was regarded as being still in an experimental stage, was leased to a company in 1910. Considerable success has been attained in Burma also with camphor: it is reported that the cultivation of this tree has there passed beyond the experimental stage. It has also been reported to be doing well in Madras. Among other trees to which attention has been given with varying degrees of success in different provinces, mahogany and various species of eucalyptus may be noticed. A good deal of attention has recently been given also to lac, the cultivation and collection of which in the past have been carried on, for the most part, by the aboriginal races on primitive lines.

Yield of the Forests.—The out-turn from the forests of India is, for the sake of convenience, generally classified under the heads timber; fuel; bamboos; and minor produce, including under the last head grass and grazing, besides all those numerous products found or manufactured in a forest. The average annual out-turn from State forests of all classes during the decade approximated to the following figures: timber, 65,000,000 cubic feet; fuel, 170,000,000 cubic feet; and bamboos, 200,000,000, with minor produce valued at between £300,000 and £500,000. The greater part of the produce shown in the returns comes from the reserved forests. A certain proportion, valued at some £300,000 a year, is given away free or sold at reduced rates. In 1910–11 the forest produce removed by right and privilege holders comprised some 3,262,000 cubic feet of timber, 75,009,000 cubic feet of fuel, and bamboos and minor produce to the value of 206,000*l*., while the corresponding figures for forest produce granted free were 2,148,000 cubic feet, 6,724,000 cubic feet, and 37,000*l*.

—	Out-turn of Timber.	Out-turn of Fuel.
	Thousands of Cubic Feet.	Thousands of Cubic Feet.
Bengal	6,604	17,026
Bihar and Orissa	1,110	15,860
Assam	5,466	8,822
United Provinces	6,287	11,911
Punjab	4,108	16,404
North-West Frontier Province	534	553
Central Provinces and Berar	6,723	25,304
Burma	33,234	15,622
Madras	3,989	24,148
Bombay	5,349	44,768
Total of above provinces	73,404	180,418

The total out-turn of timber and fuel from State forests in each of the larger provinces in 1911–12 is shown in the margin. The total quantity of teak extracted by Government agency and purchasers in Burma was 252,723 tons. The methods of exploitation are ruled by the requirements of the different provinces. A broad classification under the heads of removal by Government agency, by purchasers, by free-grantees, and by right-holders, shows that the greater part of the output comes under the second head. It is the recognised policy to relieve the Forest Department, as far as possible, of timber

operations and to substitute private enterprise, and Government agency is chiefly confined to controlling the removal of produce by contractors.

The importance of the forests from an economic point of view depends primarily on the demand for their produce in India. The export trade may be taken to represent cases in which the yield is in excess of local requirements or commands abroad a higher price than is justified by its local importance. For the latter reason, the valuable timbers of the red padouk and teak are now only sparingly used by the inhabitants of the country, while, on the other hand, various articles of minor forest produce, such as lac and tanning materials, are produced in excess of the local demand. The table below shows the quantity (where available) and value of the total exports of forest produce from India in different years. The figures include the produce of forests not under State management, which appear to account for a large proportion of the exports of minor forest produce.

	1901–02.		1906–07.		1910–11.		1911–12.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£	Tons.	£
Teak	60,671	476,924	44,202	409,886	53,088	579,502	48,375	487,719
Sandal-wood	—	52,247	—	75,392	—	89,067	—	88,658
Ebony and other ornamental woods.	—	4,103	—	2,926	—	3,301	—	1,554
Other timber (excluding firewood).	4,006	15,673	5,756	22,234	5,419	30,882	6,620	44,092
Caoutchouc	207	40,280	224	74,566	194	106,450	448	230,603
Lac (of all sorts)	7,853	640,352	13,464	2,333,183	21,081	1,428,572	21,400	1,342,694
Cutch and gambier	3,308	80,598	4,868	106,327	4,552	111,441	4,050	86,533
Myrobalams	54,259	237,577	58,111	293,173	82,945	465,097	61,683	333,520
Cardamoms	65	15,033	90	14,611	160	30,459	135	27,088
Total value	—	1,562,787	—	3,332,298	—	2,844,771	—	2,642,461

NOTE.—In the case of woods the figures are for cubic tons. Values are at port of shipment.

The changes in the quantity and value of exports of lac were chiefly responsible for the variations in the figures of total value. The lac market in the latter years of the decade was very depressed.

Financial Results.—Forest revenue is raised by royalties on, or by the sale of, timber or other produce, and by the issue at specified fees of permits to graze cattle, or to extract for sale timber, firewood, charcoal, bamboos, canes, and other forest produce. The figures of forest revenue and expenditure in the margin, quoted from the Finance and Revenue Accounts, include Kheddah receipts and charges in Burma, and the net revenue from forest operations proper was therefore somewhat greater than that shown. The elephant-catching operations in Burma during the decade were run at a loss, and the Kheddah Department has since been disbanded. The net revenue, though subject to fluctuations, shows a decided upward tendency.

	Revenue.	Expenditure.	Net Revenue.*
	£	£	£
1901–02	1,157,355	705,581	451,774
1902–03	1,298,103	751,783	546,320
1903–04	1,481,116	813,618	667,498
1904–05	1,601,997	869,138	732,859
1905–06	1,779,566	954,818	824,748
1906–07	1,768,911	948,866	820,045
1907–08	1,732,610	980,340	752,270
1908–09	1,700,894	994,158	706,736
1909–10	1,735,386	1,006,697	728,689
1910–11	1,829,557	1,033,261	796,296
1911–12	1,952,179	1,142,202	809,977

* The difference between these figures and those given on page 152 is due to the fact that the latter take into account refunds, but do not take into account the expenditure here shown.

The increase in expenditure was in part due to a considerable increase in the number of officers in all branches of the Forest Service, and to improvements made in the conditions of service.

(Forests.)

The table below gives detailed figures for 1911–12.

	India, General.	Central Provinces and Berar.	Burma.	Eastern Bengal and Assam.	Bengal.	United Provinces.	Punjab.	North-West Frontier Province.	Madras.	Bombay.	TOTAL.
REVENUE.	£	£	£	£	£	£	£	£	£	£	£
From produce removed by Government agency:—											
Timber	41,852	4,946	169,065	22,973	590	366	5,864	1,647	23,722	52,700	323,721
Firewood and charcoal	2,927	1,414	4,902	6	41	9,728	8,329	1,272	56,547	18,963	104,129
Bamboos	3	469	2	—	853	—	246	—	6,959	18	8,551
Sandal-wood	5,748	—	—	—	—	—	—	—	9,316	2,087	17,181
Grass and other minor produce	229	8,463	172	2,382	93	9,212	881	37	3,028	27,441	51,937
From produce removed by consumers or purchasers:—											
Timber	2,902	28,773	390,687	45,277	39,945	116,432	24,604	5,104	17,783	103,982	776,000
Firewood and charcoal	693	13,281	11,931	4,342	15,564	15,755	19,937	525	30,606	23,585	136,218
Bamboos	117	12,980	15,984	4,494	1,769	14,917	830	—	12,573	6,142	69,806
Grazing and fodder grass	763	62,084	473	5,895	1,600	8,749	11,869	908	42,626	33,135	175,043
Other minor produce	1,608	18,815	26,901	9,071	11,337	16,166	936	18	54,093	11,429	150,375
Miscellaneous	93	4,685	—	9,906	1,436	—	—	—	—	246	16,366
Kheddah receipts	—	—	4,552	—	—	—	—	—	—	—	4,552
Other receipts	1,794	7,079	39,837	14,245	2,501	7,751	14,507	1,034	20,637	8,914	118,299
Total Revenue	58,669	169,990	664,506	118,591	74,829	201,077	87,338	10,545	277,928	288,705	1,952,179
EXPENDITURE.											
General direction	6,046	2,646	2,455	—	—	—	—	—	—	—	11,147
Conservancy and works	23,535	50,594	132,728	38,292	21,608	51,989	20,766	2,583	132,392	92,637	567,423
Establishments	25,529	69,318	90,228	35,681	25,484	38,922	30,244	3,380	95,267	84,992	549,045
Kheddah charges	—	—	8,404	—	—	—	—	—	—	—	8,404
Charges in England	—	—	—	—	—	—	—	—	—	—	6,183
Total Expenditure	55,410	122,559	283,815	73,973	47,092	90,911	51,010	5,962	227,659	177,629	1,142,202
Net Revenue, 1911–12	3,259	47,431	380,691	44,618	27,737	110,166	36,328	4,583	50,269	111,076	809,977
Net Revenue, 1901–02	– 3,383	9,367*	215,166	12,257*	42,340	47,118	33,948	– 434	55,592	44,003	451,774

* Assam and Central Provinces only.

CHAPTER XV.

MINERAL PRODUCTION AND MINING.

Mineral Production.

The feature that stands out most prominently in a survey of the mineral resources of India is the fact that, while striking progress has been made in recent years in opening out deposits from which products are obtained suitable for export, or for consumption in the country by what may be called direct processes, very little has hitherto been done to develope those minerals that are associated with the more complicated metallurgical and chemical industries. The explanation is to be found, to a great extent, in the importance of bye-products in modern metallurgical and chemical developments. A country like India must be content to pay the tax of imports until industries arise demanding a sufficient number of chemical products to complete an economic cycle, and India does in fact import at present large quantities of metals and mineral products, while possessing in many cases the mineral resources required to supply the demands in question. There is thus great scope for the development of mineral industries for supplying the internal requirements of the country, quite apart from any markets that might be found abroad. These considerations lend additional interest to the commencement of operations by the Tata Iron and Steel Works, of which some particulars are given elsewhere.

Taking the minerals for which approximately accurate returns of production are available, the total value of the Indian output in 1911 was stated at £7,657,000, as compared with £4,492,000 in 1901. A part of the increase, but only a small part, was due to the inclusion of new minerals in the list. The figures of value, however, though they suffice to give an idea of progress from year to year, cannot be used, except in a very rough way, for purposes of more extended comparison, being in some cases export values, and in others values at the mine-head, which vary with the position of the mine. The table below, which includes all the minerals of the class referred to above the output of which was valued in 1911 at more than £6,000, gives also the figures of quantities.* Some production in Native States is included :—

	Quantities.					Value.	
	1901.	1904.	1907.	1910.	1911.	1901.	1911.
						£	£
Coal (*tons*)	6,635,727	8,216,436	11,147,339	12,047,413	12,715,534	1,323,372	2,502,616
Gold (*ounces*)	532,303	618,746	557,387	572,120	583,567	1,931,030	2,238,143
Petroleum (*thousands of galls.*)	50,075	118,491	152,046	214,830	225,792	204,342	884,398
Manganese-ore (*tons*)	157,736	150,190	902,291	800,907	670,290	215,934	648,701
Salt (*tons*)	1,102,039	1,105,051	1,102,785	1,485,613	1,225,490	374,133	429,295
Saltpetre (*tons*)	15,555	15,480	14,404	15,886	14,674	191,904	220,012
Mica* (*cwts.*)	16,298	19,575	38,922	42,593	48,871	70,034	207,778
Lead-ore (*tons*)	—	—	—	31,211	35,361	—	181,989
Tungsten-ore (*tons*)	—	—	—	395	1,308	—	99,989
Rubies, sapphires, and spinels (*carats*).	229,127	265,901	334,535	262,019	288,213	105,936	67,594
Iron-ore (*tons*)	49,798	71,685	68,729	54,626	366,180	7,932	54,487
Jadestone* (*cwts.*)	3,015	4,130	4,001	6,165	2,028	31,713	29,815
Tin-ore (*cwts.*)	1,394	1,414	1,584	1,776	1,946	7,773	9,388
Silver†	—	—	—	—	—	—	11,575
Graphite (*tons*)	2,785	3,323	2,433	3,992	4,048	15,248	9,425

* Figures represent exports in official years. † From silver-lead ore.

Coal and petroleum show rapid and practically continuous development, manganese-ore great progress between 1904 and 1907, and iron-ore a sudden advance in 1911, due to the commencement of operations by the Tata Iron and Steel Company. The output of gold varied little throughout the decade.

(Mineral Production.)

Coal.—Coal, formerly second to gold, has since 1907 taken the first place among Indian minerals as regards the total value of the annual output, though the estimate of value is based on the low prices accepted at the pit-mouth. Coal of varying quality is widely distributed in India, but Bengal* is by far the most important of the coal-producing areas, and was responsible for practically the whole of the increase in production during the decade. The figures for 1901 and 1911 in the margin show that the output in Bengal was more than doubled between those years. Taking into account the coal removed by miners for their own use, the total production in 1911 might be put at very nearly 13 million tons. The total for that year was not quite so high as that for 1908, when the recorded output reached 12,769,635 tons. A good deal of the coal then won was of a very inferior description, and many of the second-class mines that owed their existence to the boom of 1908 have since been shut down. The most valuable of the coal-fields in Bengal lie in an area running, roughly, east and west along the valley of the Damuda river. The easternmost of these fields, known as the Raniganj field, being the nearest to Calcutta, was the first to be opened up, and held the first place as regards production up to 1905. It now stands second to the Jherria field, first worked in 1893, which in 1911 produced 6,373,728 tons, while the Raniganj field yielded 4,311,956 tons. Of the remaining fields in Bengal, the Giridih field, with an output of 704,443 tons in 1911, is the most important. Outside Bengal, the most important mines are those at Singareni, in Hyderabad.

	Quantity of Coal produced.	
	1901.	1911.
	Tons.	Tons.
Bengal - - - -	5,487,585	11,468,904
Assam - - - -	254,100	294,893
Central Provinces - -	191,516	211,616
Baluchistan - - -	24,656	45,707
Punjab - - - -	67,730	30,575
Burma - - - -	12,466	—
N.W. Frontier Province	—	140
Hyderabad - - -	421,218	505,380
Central India - -	164,362	143,558
Rajputana (Bikaner) -	12,094	14,761
Total - - -	6,635,727	12,715,534

The output of coal in India, though it is very small by comparison with that of countries like the United Kingdom and Germany, and amounts only to something like 1 per cent. of the world's total output, continued throughout the decade to keep ahead of the Indian consumption, the exports of Indian coal being in every year greater than the imports of foreign coal. Up to 1901 the imports had exceeded the exports. Both imports and exports fluctuate a good deal. The imports, which come mainly from the United Kingdom, were on a smaller scale than in the preceding decade, but showed some tendency to increase, rising to 490,000 tons in 1909. The exports, on the other hand, maintained a higher general level than before, the largest total being recorded in 1906, when over a million tons were exported, excluding bunker coal. Ceylon and the Straits Settlements are the principal markets for Indian coal.

The export figures indicate that the greater part of the expansion in the Indian coal trade must be due to industrial development in India itself. The general character of the coal-consuming industries did not, however, change during the period under review. Railways and railway workshops consumed in 1911 about a third of the available coal supply. Throughout the decade 98 or 99 per cent. of the coal used on the Indian railways was of local production. Wood is still used in considerable quantities on some lines, but the total amount fell from 409,000 tons in 1901 to 133,000 tons in 1911. Apart from the collieries themselves, and railways and steamers, the largest consumers are brick and tile factories, cotton and jute mills, and iron and brass foundries. All other forms of industrial and domestic consumption were estimated in 1911 to account altogether for about 2¼ million tons only.

Coal-mining employs far more labour than any other mining industry, the average number of persons employed being 116,000 in 1911, as compared with 95,000 in 1901. Of the total number in the former year, about 37,700 were women and 2,642 children. The number of children employed fell somewhat during the decade. The workings in India are, with few exceptions, comparatively shallow, and only about two-thirds of the workers are employed below ground. The death-rate by accidents is low, the average for the last 10 years being a little over 1 per 1,000 per annum for all workers. The workers are mostly landless day-labourers, with some agriculturists. In some of the long-established mining centres, however, a population wholly devoted to mining is being evolved. The Indian miner being still to some extent a miner by caprice,

* "Bengal," as here used, includes the territories forming the new province of Bihar and Orissa. Bengal as now constituted includes only the Raniganj field.

scarcity of labour is apt to become acute in times of agricultural prosperity. As the workings get deeper, the need of a specialised mining population will become greater. The use of electricity on the coal-fields is extending.

Gold.—The gold produced in India comes almost entirely from the mines on the Kolar field, in Mysore. Gold mining in other parts has, however, shown some development in recent years, and the metal is also washed in small quantities from the river gravels of various parts of India. An important improvement, making for the reduction of working expenses, and consequently for the prolongation of the life of the Kolar field, was the introduction of electric power from the Cauvery falls in 1902. The mine at Hutti, in Hyderabad, opened in 1903, takes second place in the order of importance. Other mines had been worked in earlier years in Hyderabad, though no output was recorded in 1901. The mines in the Dharwar district of Bombay were closed down in 1911; but in the Anantapur district of Madras, where the workings were opened only in 1910, the output was doubled, and a second mine was being developed. The greater part of the present output in Burma is won by dredging on the Irrawaddy, and the small quantities produced in the remaining provinces are obtained by washing. There is no complete record of the gold obtained in this latter way, which is used locally for making jewellery. The Mysore gold-fields employ some 30,000 persons, and the Hyderabad and Madras fields about 1,300 and 1,100 respectively.

	Quantity of Gold produced.	
	1901.	1911.
	Ounces.	Ounces.
Mysore	530,142	555,011
Hyderabad	—	13,726
Burma	1,984	6,413
Madras	—	5,284
Bombay	—	2,993
Punjab	151	135
United Provinces	26	6

Petroleum.—The progress made in recent years in developing the petroleum resources of India has been very rapid. The total output of crude oil, which in 1901 was 50 million gallons, and in 1891 less than 7 million gallons, was in 1911 nearly 226 million gallons. The increase was practically continuous, but the highest total on record—nearly 234 million gallons—was attained in 1909. Petroleum is found in India in two distinct areas, at either end of the Himalayan arc. The eastern of the two areas is by far the more important, and, as the figures in the margin show, Burma is responsible for all but a very small fraction of the total production. The most productive oil-fields are in the Irrawaddy valley, where Yenangyaung, the oldest and best known of the fields, produced throughout the decade something like two-thirds, and in the closing years a larger proportion, of the total output, production in this area being stimulated by the advent of rival companies. In the same region lie the Yenangyat and Singu fields. Oil occurs both further north and further south in Burma, but the great development during the decade was the outcome of work in these three fields. The output of the Yenangyat field was never very large, and declined from over 22 million gallons in 1903 to 4½ millions in 1911. The Singu field, where oil was first struck in 1901, contributed in 1911 over 50 million gallons, the highest figure so far recorded, though it had been reported a few years earlier to be showing signs of exhaustion. The efforts made to discover other productive fields had not up to the end of the decade achieved any very marked success, but a new field at Minbu, first worked in 1910, produced 632,000 gallons in 1911. The output of the Digboi field, in Assam, has increased steadily as a result of the formation of the Assam Oil Company in 1899, but the company has had to face unusual difficulties The oil-fields are reported to employ a daily average of about 6,600 persons.

	Output of Petroleum.	
	1901.	1911.
	Gallons.	Gallons.
Burma	49,441,734	222,225,531
Assam	631,571	3,565,163
Punjab	1,812	1,400

The consumption of kerosene in India is rapidly increasing, and the activity of production in Burma has had no marked effect on the imports of foreign oils; but of the kerosene consumed in India (excluding Burma) 53 per cent. was of Indian origin in 1911–12, as compared with 13 per cent. in 1901–02. The exports of kerosene to foreign countries were in most years of the decade very small; but the exports of other petroleum products, and especially of paraffin wax, increased greatly in the closing years, reaching a total value of £442,000 in 1911–12.

(Mineral Production.)

Manganese.—The mining of manganese-ore, the development of which was a striking feature of the earlier part of the decade, and more particularly of the years 1905–07, commenced in 1892 with the quarrying of deposits in the Vizagapatam district of Madras. In 1900 the richer deposits of the Central Provinces were also attacked, and these now yield the greater part of the ore extracted. The ore raised in the Central Provinces is of a very high grade, and is consequently able to bear the heavy tax of freight over 500 miles of railway, besides the shipment charges to Europe and America. The recorded output rose from 150,000 tons in 1904 to 902,000 tons in 1907, since which date the figures have been considerably lower. No manganese-ore was, up to the end of the period under review, consumed in India, and the figures just given may be compared with the returns of exports.

	Output of Manganese-ore.	
	1901.	1911.
	Tons.	Tons.
Central Provinces	81,263	445,051
Madras - -	76,473	125,865
Bombay - - -	—	45,330
Bengal - -	—	25,152
Central India -	—	7,319
Mysore - -	—	21,573

Exports of Manganese-ore.

	Tons.
1901–02 -	133,170
1902–03 -	155,275
1903–04 -	181,189
1904–05 -	180,945
1905–06 -	316,694
1906–07 -	492,993
1907–08 -	548,420
1908–09 -	438,013
1909–10 -	500,344
1910–11 -	572,979
1911–12 -	536,076

Note.—These figures exclude exports from the Portuguese port of Mormugao.

A fall in the prices towards the end of 1907 checked production, but there were, nevertheless, stocks of some 300,000 tons on hand at the mines at the end of 1908. Production in excess of the exports has continued, and rose to a high figure again in 1910 as the result of a rise in prices. In 1911 both production and exports fell off again with a fall in price. One unsatisfactory aspect of the manganese industry is the loss that India has suffered by exporting manganese-ore and importing steel, instead of manufacturing at least a portion of the ore into ferro-manganese. The establishment of a flourishing steel-manufacturing industry in the country would mean that much of the manganese would be retained, while lower grade ores could also be economically developed. The total number of persons employed in the manganese industry may be estimated very roughly at 20,000.

Iron.—India has large deposits of valuable iron-ores, though the manufacture of iron on European lines has in the past been very limited, and the native iron-smelting industry has been practically stamped out, within range of the railways, by cheap imported iron and steel. The greater part of the reported output of iron-ore is in (the old province of) Bengal, where the Bengal Iron and Steel Company's works at Barakar up to 1911 represented the only success among the various attempts made in earlier years to introduce European processes for the manufacture of pig-iron. Elsewhere ore is extracted only on a very small scale, for the purposes of small native furnaces. Up to 1910 the reported output fluctuated without making any decided advance, the figures being 49,798 tons in 1901 and 54,626 tons in 1910 (both exceptionally low totals). In 1911 the output rose suddenly to 366,180 tons. Reference is made elsewhere* to the Tata Iron and Steel Company, whose operations in Orissa were mainly responsible for the increase. In the returns for future years, iron-ore will no doubt take a more prominent position.

Salt is dealt with elsewhere (Chapter XII.).

Saltpetre comes in largest quantity from Bihar, where, with a dense agricultural population, the conditions for the natural production of the compound (as an efflorescence on the soil) closely approach the theoretical ideal. The United Provinces and the Punjab are also important sources of supply. The crude saltpetre obtained from the soil is refined at special factories to be met with all over Northern India. The trade in saltpetre has not its old importance, but the cost of manufacture and transport is sufficiently low to maintain a considerable export trade. In 1911–12 the exports amounted to 13,728 tons, valued at £214,399, Hong Kong, the United States, and the United Kingdom being the chief markets.

Mica.—India has for many years been the leading producer of mica, turning out more than half the world's supply. The principal areas of production are in Bengal and Madras. The returns of production being unreliable, the figures given in the table

* Page 281.

above are for exports. A considerable quantity of mica of the poorer grades is consumed in the country for decorative purposes. There was from 1905 onwards a great increase in the world's annual production of mica (due largely to the invention of "micanite," and the resulting increased application of mica in the arts), in which India shared fully. The industry employs some 16,000 persons. The gradual exhaustion of the outcrop workings is compelling some owners to introduce more modern methods of working.

Lead and Silver.—Lead-ores, containing in many cases a high proportion of silver, occur in various parts of India, and have been worked in the past, but the industry gave way before the cheap imported metal. Since 1909 considerable quantities of lead have been obtained by the Burma Mines Company from the ancient mines at Bawdwin in the Shan States, which were worked until about 50 years ago by Chinese, who left behind enormous heaps of slag, thrown away after smelting out a portion of the lead with the bulk of the silver. Smelters have been erected at Mandalay, and increasing quantities of both lead and silver have been produced, mostly from the silver lead slags, but to some extent from ore. Small quantities of lead are produced in some other localities in Burma; outside Burma the production is negligible.

Tungsten.—Wolfram has been found in various parts of India. Considerable activity has followed the discovery of the ore *in situ* in Lower Burma, a few years ago, during investigations carried out by the Geological Survey with reference to the tin industry. Some 66 prospecting and exploring licences were taken out in the Tavoy and Mergui districts in 1911 with a view to searching for wolfram, tin, and associated metals, and work was being carried on in a large number of localities, mostly in Tavoy. European companies were engaged in opening up some of the larger deposits, and it was hoped that systematic development would take the place of the short-sighted methods of exploitation practised at the outset. Wolfram is extracted in small quantities in one of the Shan States, and trifling amounts have been reported in some years from other parts of India.

Gem-stones.—The precious and semi-precious stones at present mined in India are the diamond, ruby, sapphire, spinel, tourmaline, garnet, rock-crystal and the various chalcedonic forms of silica, jadeite, and amber. Only in the cases of the ruby and jadeite does the production attain any considerable value. The diamond-mining industry still persists in some places, but the output is very small, that for 1911 being valued at £478 only. The ruby-mining industry, which is carried on by the Burma Ruby Mines Company at Mogok, and to some extent by native miners in the same area, has been depressed since 1907, when the demand for rubies suddenly fell away and prices declined. In 1911 there was still very little demand for the larger and finer stones, though there was a brisk market in India for the inferior qualities. The ruby-mines employ some 1,500 persons. Jadeite is also a product of Upper Burma, where the industry of quarrying this mineral is of some importance. The jadeite raised is mostly exported to China, where it is specially valued.

Other Minerals.—Of the other minerals as to which statistics are available, none are at present of very great importance. The only persistent attempts to work tin have been in Burma, and production there had not, up to the end of 1911, shown any great development, though various companies had been formed to work the deposits, and modern scientific methods were being introduced. The industry is carried on by a number of small holders working on primitive lines. Graphite is mined chiefly in Travancore. Among other minerals mined on a small scale are chromite, in Baluchistan and Mysore, and magnesite in Madras. Copper was formerly smelted in considerable quantities in various parts of India, and prospecting operations during the last few years have resulted in the extraction of a good deal of ore. Rich deposits of bauxite have been brought to notice, and give promise of a prosperous industry, but have so far remained undeveloped. Considerable attention has been given by prospectors in recent years to the minerals of the so-called rare metals. In this connection the discovery of monazite, in 1908 or early in 1909, may be specially noticed. Active work began on the deposits of this mineral, which occur among the beach sands of the Travancore coast, in 1911, when 832 tons of monazite are reported to have been obtained, and over 1,000 persons to have been employed daily.

No satisfactory estimates can be given of the production of building materials, road metal, and clay. India has an unlimited supply of ornamental building stone,

though considerable quantities of marble and other forms of stone are imported from Europe. Such returns as are available for 1911 show a yield of nearly 600,000 tons of granite, nearly 800,000 tons of laterite, nearly 400,000 tons of sandstone, and over 1,100,000 tons of limestone and *kankar*, mostly from Burma and Madras, nearly 2,000 tons of marble from Rajputana, nearly 17,000 tons of slate, mostly from the Punjab and United Provinces, and over 600,000 tons of trap from Bengal. Burma returned an output of 710,000 tons and Madras one of 418,000 tons of clay, and other provinces may be assumed to have produced similar quantities. The clays include the common clays used all over the country for the manufacture of bricks, tiles, and the cheaper forms of pottery, finer varieties used for glazed pottery, fire-clays raised in considerable quantities on some of the coal-fields, and fuller's earth, which is mined in the Central Provinces and in Rajputana.

One regrettable feature of the record of the mineral resources of India is the absence, in a country where agriculture is such a predominant industry, of any phosphatic deposits of value.

Regulation and Inspection.

Mining Concessions.—The grant of licences to explore and prospect for minerals, and of mining leases, in areas where mineral rights are the property of the State, continued throughout the period under review to be regulated by the rules promulgated in 1899. These rules provide for the grant of "exploring licences," which give no exclusive or preferential rights, and of "prospecting licences," which confer the sole right to mine in a specified area for a limited period, together with a right to be granted subsequently a mining lease, or, in the case of precious stones, to have the first offer of a mining lease. As regards mining leases, the rules provide for their being granted by local Governments (except in the case of precious stones) for periods not exceeding 30 years, on conditions which include the payment of royalty or dead rent and the commencement of operations within two years. The maximum areas to be covered by mining leases for different minerals are prescribed, and it is provided that local Governments may not grant a lease so as to cause the total area held under mining leases by the lessee, or by those joint in interest with him, to exceed 10 square miles. The rates of royalty laid down are 1 anna per ton for coal, 8 annas per 40 gallons, or 5 per cent. *ad valorem*, for oil, 7½ per cent. on the net profits in the case of gold and silver, ½ anna per ton of ironstone, 2½ per cent. on sale value in the case of other metals, and 30 per cent. on the net profits in the case of precious stones.

The revision of the rules has been under consideration for some time, and it is expected that revised rules will shortly be promulgated.

In some areas, including most of the coal-bearing land in Bengal, mineral rights have passed permanently into private hands with the surface ownership.

In practically all native states the mineral rights belong to the respective rulers, and concessions are granted for prospecting and mining under rules that involve a certain amount of supervision by the Government of India.

The number of concessions granted in Government lands showed a great increase during the decade. In 1901 the total number (including 15 exploring licences) was 104; in 1911 the total was 775, as compared with 635 in the previous year. The increase in 1911 was due chiefly to the large number of licences and leases taken out in Burma, where the grant of so many as 306 prospecting licences may be attributed to the rush for wolfram in Tenasserim. Most of the remaining concessions were in the Central Provinces, and related to manganese. The remaining provinces between them accounted for only about one-eighth of the total number of concessions. The greater part of the concessions granted—rather more than three-quarters—took the form of prospecting licences.

Inspection of Mines.—Arrangements were made by Government in 1894, in consequence of the growth of the mining industry, for the preliminary inspection of the chief mining areas, and an Indian Mines Act, which remained in force without modification throughout the decade, was passed in 1901. The definition of "mine" for the purposes of the Act is comprehensive; but it does not include any excavation no part of which is 20 feet deep and no part of which extends beneath the superjacent ground. The Act provides for the appointment of inspectors of mines, and for the constitution of local mining boards and committees with various functions in connection with the regulation of mines. It is in the main an enabling Act, conferring wide rule-making powers on the Government of India and the local governments.

(Regulation and Inspection of Mining.)

The table below shows the number of mines coming within the scope of the Act, and the number of workers, in 1902 and 1911, the figures for the former year being in italics :—

Class of Mines.	Number of Mines under the Act.	Number of Mines inspected during Year.	Average Number of Persons employed daily in and about the Mines.						Total.
			Below Ground.			Above Ground.			
			Men.	Women.	Children under 12.	Men.	Women.	Children under 12.	
Coal - - -	450	362	43,783	24,579	505	24,803	11,454	1,474	106,598
	305	*249*	*41,717*	*17,009*	*1,726*	*17,969*	*9,149*	*1,935*	*89,505*
Mica - - -	488	115	6,081	2,733	394	2,105	2,307	1,954	15,574
	91	*80*	*4,709*	*1,178*	*143*	*1,010*	*1,142*	*1,318*	*9,500*
Manganese - -	44	23	5,847	3,387	128	1,785	1,103	134	11,884
	24	*17*	*3,179*	*1,923*	*96*	*335*	*293*	*221*	*6,047*
Limestone - -	21	27	870	973	176	581	792	80	3,472
	14	*14*	*652*	*332*	*86*	*282*	*689*	*253*	*2,294*
Gems - -	7	—	708	7	2	825	—	—	1,542
	34	*1*	*1,005*	*12*	*4*	*861*	—	—	*1,882*
Gold - - -	4	3	560	—	—	700	69	45	1,374
	6	—	*224*	—	—	*304*	*109*	—	*637*
Iron - - -	2	—	351	25	37	545	410	—	1,368
	3	*2*	*220*	*170*	—	*70*	*50*	—	*510*
Copper - -	1	1	423	313	51	533	—	3	1,323
	1	—	*12*	—	—	*7*	—	—	*19*
Grand total, all mines.	1,058	548	59,471	32,682	1,503	32,577	16,289	3,814	146,336
	528	*390*	*53,224*	*21,353*	*2,233*	*21,272*	*11,684*	*3,808*	*113,574*

No other class of mines coming under the Act, beyond those shown separately in the table, employed in 1911 as many as 1,000 workers. The figures are, of course, for British India only.

There were in 1911, in mines coming under the Act, 137 fatal accidents, this being an increase of 20 on 1910 and of 11 on the average of the preceding three years. The total number of lives lost was 174, or 12 less than in 1910. Of the total number of deaths, 148 were in coal-mines ; 94 were caused by falls of roof and sides, and 17 by explosions of fire-damp. The Chief Inspector of Mines reports that greater vigilance on the part of the subordinate officials is called for ; but that inexperience on the part of the miners, who rarely examine their working places, still contributes towards many of these accidents.

The mine inspection staff at the beginning of the decade consisted of a chief inspector and two inspectors. A third inspector was added in 1906, and a post of junior inspector has been added since the end of the decade. There were in 1911 twelve prosecutions under the Act, all but one resulting in conviction. One of the convictions was of a workman who was prosecuted by the manager.

CHAPTER XVI.

INDUSTRIES AND MANUFACTURES.

Though India remains pre-eminently an agricultural country, and there is as yet practically no factory population, such as exists in European countries, consisting of a large number of operatives trained from their youth to one particular class of work and dependent upon employment at that work for their livelihood, the advance of organised industries has been a notable feature of recent years. Where industrial development is most marked, it is profoundly affecting the lives and habits of the people. Thus it is reported from Bombay that it has become habitual for large classes of the smaller cultivators to till their fields during the monsoon, and after reaping their crops to migrate to the towns for labour during the off-season; also that there is little doubt that the comparative immunity of even the lower classes of workers from the Gujarat famine of 1911 was due to the fact that the mills of Ahmedabad and other towns gave employment to agriculturists whose crops had failed. There has of late years been much discussion in India as to the possibilities of industrial development, and as to the advantages of encouraging manufactures and securing greater diversity of occupation in a country that so largely depends on agriculture. Numerous conferences have been held, particularly during the latter years of the decade—some convened by local Governments to discuss schemes for the different provinces, others non-official, such as the Indian Industrial Conference that has met annually in various parts of India since 1905. Exhibitions, also, have helped to spread a knowledge of improved methods in India, and to bring Indian manufactures to notice in other countries; the United Provinces Exhibition at Allahabad in 1910–11, in particular, aroused much interest, and it was hoped that it would result in a great impetus to the industrial development of the province. Mention may also be made in this connection of the movement for fostering home industries and encouraging the use of home manufactures known as the *Swadeshi* movement, which has, in its legitimate forms, received official support.

Government and Industrial Development.—The increased attention given to industrial development, which was further illustrated by the constitution of a separate Commerce and Industry Department of the Government of India in 1905, has resulted in action in various directions. In Madras, at the beginning of the decade, an officer had already been placed on special duty for the purpose of restoring and developing technical trades and industries, and had taken successful measures towards introducing and developing the aluminium industry. In 1906 he was appointed Director of Industrial and Technical Inquiries, in pursuance of the intention of the Government of Madras to take up the more important industries of the Presidency, and to arrange for their detailed study with a view to discovering possible improvements. Special attention was given to the development of the chrome leather industry and the improvement of hand-loom weaving. A Government weaving factory was opened at Salem with the object of introducing improved hand-looms and demonstrating the superior efficiency of the factory system, and a chrome tannery was also established. The weaving factory was closed, and the chrome tannery sold to the Rewah Durbar, in 1910, in accordance with the decision that the State should not undertake to demonstrate industrial processes commercially, but the special department for dealing with industrial education and development has continued it work. It includes dyeing and leather experts engaged for instructional purposes. In other provinces, also, industrial surveys have been carried out and further action on lines generally similar to those followed in Madras has been taken. In the United Provinces a conference held in 1907 formulated a comprehensive scheme for technical education and the encouragement of industries; a number of weaving schools and some hand-loom weaving factories have been established, and a Director of Industries was appointed in 1910. In Bengal, where special attention has been given to the silk industry, among others, a Superintendent of Industries and Inspector of Technical and Industrial Institutions has been attached to the Educational Department since 1909. In the Central Provinces a scheme has recently been worked out with a view more particularly to the revival and preservation of cottage industries, especially weaving, tanning, and shoe-making. Industrial surveys, the

object of which is to furnish material for the consideration of the possibilities of development, have been completed in Eastern Bengal and Assam and the Punjab, as well as in the provinces already mentioned, and have been carried out for some of the most important industries in Bombay and Burma. Much of the action taken with a view to industrial development falls under the head of technical and industrial education, and will be referred to again in the chapter on Education. The development of weaving schools in some provinces, which has already been noticed, was one feature of a very considerable advance under this head. Another was the institution of State Technical Scholarships, with which picked Indian students are sent to this country for technical training; this system of scholarships dates from 1903, its object being to provide the higher technical education necessary to qualify the holders, on returning to India, to assist in promoting the improvement of existing industries and the development of new industries wherever possible. Up to the end of the period under review, 66 such scholarships had been granted by the Government of India for the study of technical subjects covering a wide field of industry. In India the means taken to familiarise the people with improvements extend to demonstrations in workshops and by small experimental plants, stopping short, as has already been noticed, only at the point where experiment or demonstration passes into manufacture on a commercial scale and trading. Before leaving the general subject of the action taken by Government to develope Indian industries, one other point may be mentioned, viz., the modification in recent years of the rules for the supply of articles for the public service so as to make wider provision for local purchase. The policy of Government is to encourage the purchase of articles locally produced or manufactured, and it was laid down in the new rules published in 1909 that preference should be given to such articles when the quality is satisfactory and the price not unfavourable.

For the purpose of dealing with the chief industries separately they may be divided roughly into three classes: indigenous industries or handicrafts; organised industries connected in a specially direct way with agriculture; and other large industries, including more particularly manufacturing industries conducted on modern lines in mills and factories.

The arts and manufactures of India are more easily separable into sections, corresponding with hand-labour and steam-power, than are those of most countries; for handicrafts, in spite of the mechanical developments of the past century, are still very important to the Indian people. The carpenter, the potter, the blacksmith, the stonemason, the weaver, the dyer, the tailor, the shoemaker and the sweetmeat-maker are recognised members of most village communities. The higher crafts—those of artistic workers in wood, clay, stone, metals, and textiles—are carried on in special localities and in direct relationship to physical and administrative conditions. When, for instance, hand-labour industries are practised on a large scale they tend to become centralised in the important towns. Steam-power manufactures are not in any way indigenous industries, but have been originated, and are controlled, by the supply of raw material and fuel, by the facilities of transport, and by the degree of association with European enterprise.

Indigenous Industries.

It is impossible in this Statement to deal in any detail with the numerous indigenous industries carried on in all parts of the country. Nor can any general statement be made as to their progress during the period under review, beyond saying that there has been under this head no development comparable to that of the manufacturing industries. In some places the efforts made to introduce improvements in particular industries have, no doubt, brought about some increase of prosperity; but in many cases small industries and local handicrafts continue to decay rather than to advance. Their decline before the competition of imported and local manufactures has been mainly due to the conditions under which they are carried on. Generally speaking, they are on too small a scale to be commercially successful; little capital is employed, and the methods used are antiquated and unscientific. The weight of custom and prejudice also is often a serious obstacle to the introduction of improvements. Where ancient industries linger on in towns to which they have brought fame, the adherence of the craftsmen to stereotyped designs, and their general lack of

technical skill, tend to prevent any active demand for their wares except as curios. Some of the more important industries may be briefly noticed.

Cotton-weaving.—The most important indigenous industry, after agriculture, has always been, and still is, the weaving of cotton cloths. Cotton has for many centuries been the staple article of clothing of the people of India, and there is evidence that the arts of cotton-spinning and weaving were highly developed in the country at least 2,000 years ago. Weaving mills are at the present day responsible for by far the larger part of the cotton goods used in India; but at the census of 1901 twenty-four persons out of every thousand were returned as cotton workers, apart from those employed in mills. In Bombay, where the competition of mill-made and imported products is closest at hand, the latest figures go to show that the hand-loom weavers are holding their own, though they no doubt feel the pressure of the fall in prices. The hand and power industries occupy to some extent different provinces of supply; competition from the latter is still small in the case of special classes of goods and clothes woven from the coarsest materials, and there are still markets eminently suited to the hand-weaver which the power-loom producer does not successfully contest, because the demand is too small or too local. It appears also that where similar goods are made by hand and power-looms, the hand-made goods have the advantage in respect of durability. Frequently weaving in India is carried on in the weaver's spare time, in combination with other occupations; but here and there centres of professional hand-loom weaving still exist, where the village weaver holds an honoured position and turns out a fair proportion of the dresses worn by the more conservative and orthodox members of the community. The hand-loom weavers now rarely spin their own yarn. Some reference has already been made to the efforts made in recent years in all parts of India to improve the position of the hand-loom industry. These have taken various directions. Owing to the great variety of climatic and other conditions, the question of the measures to be adopted is largely a local one, and experience has shown that looms suited for one kind of work or for one part of the country are not always satisfactory in different local conditions. The experiments carried out in various parts of India with a view to discovering a form of loom suitable to the needs of Indian weavers have, however, though not completely successful, led to great improvements, and improved looms have been brought into use to some extent. Weaving schools have been provided in increasing numbers, and in the case of the United Provinces and Central Provinces weaving experts have been recruited from this country. Peripatetic weaving instructors have been employed in some parts by local Governments or by district boards. The establishment of hand-loom weaving factories has been reported from Madras and the United Provinces. In Bombay the view taken by the local Government after considering the report on the survey of the hand-loom industry of the Presidency was that no real improvement in the condition of the weavers could take place until they had been instructed in the proper use of their joint credit and had learnt the advantages to be gained by co-operation. The first step taken, therefore, was to appoint an assistant to the Registrar of Co-operative Credit Societies to develope such societies among hand weavers. With their relief from the disadvantageous economic position they now occupy, it will be possible for them to adopt improved methods of production, and to secure for themselves the full benefit of increased profits. The position is similar in other provinces, and special attention has been given during the last year or two to the question of forming co-operative societies among weavers.

Silk Rearing and Weaving.—The evidence available tends to show that until the advent of the East India Company mulberry silk-growing was nowhere in India an important industry. Under the fostering care of the Company, various sub-tropical races of the silkworm were acclimatised, and large quantities of silk were produced, chiefly in Bengal, and exported to Europe. The position was changed by the acclimatisation of temperate races of the worm in Europe; subsequent experience seems to have established the belief that the plains of India, or at all events of Bengal, are never likely to produce silk that can compete with the new European produce. On the lower hills of Northern India, on the other hand, considerable success has been attained with the temperate races of silkworm. The imports of silk manufactures now greatly exceed the exports, while raw silk is imported and exported in approximately equal quantities. Apart from the mulberry silkworm, India has three well-known indigenous silkworms—the *tasar*, the *muga*, and the *eri*. The first is

widely distributed on the lower hills, more especially those of the great central table-land, and feeds on various trees. The second is confined to Assam and Eastern Bengal, feeding on a laurel. The third exists in a state of semi-domestication, being reared on the castor-oil plant; this also occurs chiefly in Assam and Eastern Bengal. Silk altogether provides occupation for only a small proportion of the population—about one in a thousand according to the census of 1901. In Bengal, which is the chief producing province, mulberry silk-culture centres in Murshidabad and two or three other districts. The Bengal Silk Committee, formed in 1898, continued to do useful work, with the assistance of Government, during the period under review. In 1908 a scheme for giving effect to remedial measures proposed by a committee appointed to inquire into the state of the silk industry was sanctioned. Nurseries for the supply of pure "seed" were established, and a Sericultural Superintendent was appointed. Subsequently a class for training the sons of rearers was established at the central nursery at Berhampore. It has been reported since that some progress has been made in the eradication of *pebrine*, the disease which was one of the chief causes of the decline of the silk industry. Similar steps were taken in Eastern Bengal. Mulberry silk is produced also in the United Provinces, Punjab, and North-West Frontier Province, and in Kashmir, where sericulture has recently become established as an important industry. The silk of the Central Provinces is the *tasar*, which is fairly abundant in the forest tracts. Bombay is noted for its silk manufactures, but draws its supplies of raw silk from China, as do to a large extent the silk-weaving centres of the north of India.

The statistical returns relating to the silk industry show considerable fluctuations in the number of factories in recent years. In 1911 silk filatures were shown as employing some 6,000 persons in Bengal, and silk-mills as employing about 1,600, mostly in Bombay. These figures leave out of account works employing less than 50 persons, as well as the fairly extensive village or domestic industry in rearing, reeling, and manufacturing carried on here and there throughout India.

Shawl and Carpet Weaving.—It is only in Northern India (more especially in Kashmir) that the spinning and weaving of wool extends to the production of highly-finished and artistic goods. Scattered here and there all over the country are hand-loom factories where coarse blankets, carpets, and other fabrics are produced. This indigenous wool industry is most important in the Punjab. The great centre of shawl production is Kashmir; the industry has also been carried on for many years in parts of the Punjab, where it was introduced by colonies of Kashmir weavers. France was for many years the chief foreign market for Kashmir shawls, and the trade, which was damaged also by the competition of cheap imitations produced at Paisley, never recovered from the effects of the Franco-German War. The bulk of the Kashmir shawl-weavers became carpet-weavers or agriculturists. The latest report from the Punjab regards the case of the genuine shawl industry as "almost hopeless." Carpet weaving is carried on in various parts of the country. Important centres are Amritsar, in the Punjab, which has in recent years manufactured on a considerable scale for the American market, and Ellore and Masulipatam, in Madras, where, however, the industry has declined, as it has in Bombay. Carpet-making, it may be mentioned, is an important jail industry.

Wood-carving.—Indian wood-work shows great diversity, and many points of interest, and the wood-carvers of the country have gained a well-deserved reputation outside India. The more noteworthy crafts include carving as applied to architecture, furniture, and cabinet work, inlaying with other woods or metals, veneering, and lattice-work. The art and industrial schools of Calcutta, Madras, Bombay, and Lahore have given much attention to developing these crafts on indigenous lines, with the result that degeneration has to a large extent been prevented and a superior class of carpenters dispersed over the country. On a smaller scale, objects are carved in sandal-wood with a minuteness and intricacy of elaboration only equalled by the results attained in ivory.

Metalwork.—The purely indigenous or village metal manufactures are perhaps, after those connected with wood, the most important of all the art industries of India. Most of the household utensils are made of metal, which thus to a large extent takes the place of the porcelain and glass of Europe. Brass is most frequently employed by Hindus and copper by Muhammadans. Every large village has its copper and iron smiths and also its jeweller, and in some instances these local industries attain

(Indigenous Industries.)

considerable magnitude, as is the case with the manufacture of copper and brass vessels at Srinagar, Benares, and other towns. Ordinary domestic utensils are rarely ornamented, but the making of ornamental bowls and vases constitutes an important industry in many places.

Industries connected with Agriculture.

Tea.—The area actually under tea in India increased steadily from about 820 square miles in 1901 to nearly 900 square miles in 1911. The total area of the tea plantations is about three times the planted area. Considerably more than a half of the tea area is in Assam, and most of the remainder in Bengal, the chief tea-growing districts outside Assam being Darjeeling and Jalpaiguri in Bengal, the Nilgiris in Madras, Kangra in the Punjab, and Dehra Dun in the United Provinces. The recorded area in Madras increased during the decade from less than 10 to over 30 square miles, while the Punjab and United Provinces remained stationary with about 15 and 13 square miles respectively. A considerable amount of tea is produced also in the native states of Travancore and Cochin. The number of persons employed in the industry is about 600,000. The system of recruitment for Assam will be separately treated in a later chapter. The estimated output of manufactured tea rose during the ten years from 191 million to 268 million pounds; the output has for many years increased at a much greater rate than the planted area. The exports to the chief consuming centres are shown in the marginal table. The most noticeable features are the growth of the exports to Russia, Canada, the United States, and Ceylon, and the decline in the trade with Persia. The exports of tea from India have kept well ahead of those from Ceylon, and are now much greater than those from China, which have shown no marked increase in recent years. Of the tea entered for home consumption in the United Kingdom in 1911, India supplied 57 per cent., as against 30 per cent. from Ceylon, and less than 5 per cent. from China. The consumption of tea in India cannot be stated with any accuracy. The margin between estimated output and export, *plus* the net import of foreign tea, is some 15 million pounds a year, leaving out of account pickled tea consumed in Burma.

	Exports of Indian Tea (in thousands of lbs., 000 omitted).		
	1901–02.	1907–08.	1911–12.
By sea to—			
United Kingdom	159,123	169,465	192,915
Russia	1,625	19,183	26,414
Canada	1,059	4,981	10,572
Australasia	8,575	10,977	10,023
China	1,335	7,278	5,081
Ceylon	208	5,241	4,315
United States	1,080	2,128	3,146
Asiatic Turkey	2,626	3,514	3,133
Persia	2,531	1,464	416
Total, all countries	180,075	227,176	260,862
By land (mostly to Afghanistan)	2,800*	1,012	2,653
Grand total	182,874	228,188	263,516

* The figure for this year includes exports to Kashmir.

Note.—From 1907-08 onwards the statistics show, as far as possible, countries of final destination.

Prices had fallen very low at the beginning of the period under review, as the result of increasing the supply much more rapidly than the demand had grown. The fall in prices checked the indiscriminate extension of cultivation; and from 1900 onwards the prices obtained at the Calcutta auction sales showed an upward tendency, which became more marked in the closing years of the decade.

In 1903, at the request of the tea industry, a trifling duty was imposed, by the Tea Cess Act, on Indian tea exported from India; the proceeds (some £20,000 a year) are applied, by a representative committee, to promoting the consumption and sale of Indian tea.

The capital of joint stock companies engaged in the production of tea was in 1911 over £17,000,000, of which nearly £15,000,000 belonged to companies registered in the United Kingdom.

Research work in connection with the cultivation and manufacture of tea has been carried on since 1899 by the Indian Tea Association, with the assistance of subsidies from Government.

(Industries connected with Agriculture.)

Coffee.—The coffee industry in India is practically confined to Madras and Coorg, with the native state of Mysore. The reported area under coffee has shown a continuous diminution since 1896. According to the agricultural statistics, the total in British India fell from 188 square miles in 1901–02 to 148 square miles in 1911–12, while for Mysore the corresponding figures were 195 and 167 square miles. It is reported that in some of the coffee-growing districts coffee is giving way to tea, or, where the altitude is not prohibitive, to rubber. The advent of large supplies of cheap Brazilian coffees in the markets of Europe has, by bringing down prices, no doubt injured the coffee industry of India very seriously; but the figures of export trade, given in the margin, show no marked change in the position since 1902. The exports to the United Kingdom have in the last few years fallen off considerably, but there has been no great diminution in the trade with France, and exports to other Continental countries have shown some increase. No estimate of the quantity of coffee consumed in India can be given.

Exports of Coffee.

	Cwts.
1901–02	255,042
1902–03	269,165
1903–04	291,254
1904–05	329,647
1905–06	360,182
1906–07	228,094
1907–08	244,234
1908–09	302,022
1909–10	232,645
1910–11	272,249
1911–12	241,085

The number of persons returned as employed on the coffee estates in 1909–10, the last year for which a figure is available, was about 73,000. The factory returns for 1911 showed 13 coffee works in Madras, and one in Mysore, employing altogether about 3,500 persons.

Indigo.—Since synthetic indigo was put upon the market, in 1897, the natural indigo industry of India has declined very rapidly; apart from slight recoveries in 1906–07 and 1911–12, the decline continued without a break during the period under review. The figures for the last few years may be contrasted with those for the five years ending in 1897, in which the area under indigo averaged 2,400 square miles and the value of the exports over £3,000,000 a year. The crop is most important in Bengal (Bihar) and Madras; in the Punjab and United Provinces it now occupies little over 100 square miles altogether. In Bengal the crop is largely raised by British planters, in the other provinces chiefly by native cultivators. Scientific research work on questions connected with cultivation and manufacture has been carried out by the Bihar Planters' Association, with the aid of a grant from Government, since 1897. It is hoped that good results may be obtained from the biological line of work—on plant breeding and physiology—recently taken up.

	Area under Indigo.	Quantity exported.	Value of Exports.
	Acres.	Cwts.	£
1901–02	791,000	89,750	1,234,837
1902–03	646,000	65,377	803,788
1903–04	707,000	60,410	717,468
1904–05	477,000	49,252	556,405
1905–06	384,000	31,186	390,918
1906–07	421,000	35,102	466,985
1907–08	394,000	32,490	424,849
1908–09	284,000	24,946	326,986
1909–10	289,000	18,061	234,544
1910–11	276,000	16,939	223,529
1911–12	271,000	19,155	250,535

The returns for 1911 show 112 indigo factories, employing 33,000 persons, as compared with 567 factories, employing 159,000 persons, in 1901. As has already been mentioned, these returns include only factories employing at least 50 hands.

Other large Industries.

The information available is much more complete and detailed in the case of the large manufacturing industries of India than in that of the indigenous industries. Figures for factories coming within the scope of the Indian Factories Act, and for some of the most important industries separately, will be given below. In the first place reference may be made to the most comprehensive statistical returns available, those relating to "factories and other large industries." These include not only factories coming within the scope of the Factories Act, but also all other works employing on the average 50 or more persons a day, and go back in their present form to the year 1903. The following table shows the growth of the industrial concerns included in these returns. The figures are for British India:—

(Other large Industries.)

	Number of Works.				Average Daily Number of Operatives.			
	1903.	1907.	1910.	1911.	1903.	1907.	1910.	1911.
"Factories and other large Industries,"								
Owned by Government and local bodies - - -	*	115	119	119	*	71,000	66,000	67,000
Owned and worked by companies or individuals:								
Worked by mechanical power	1,549	2,291	2,534	2,563	529,000	741,000	794,000	779,000
Not worked by mechanical power - - - - -	911	553	549	417	133,000	87,000	92,000	74,000
Total - - -	2,460	2,959	3,202	3,099	662,000	899,000	952,000	920,000

* Figures not available.

A large part of the decrease under the head of factories not worked by mechanical power was accounted for by indigo factories and cotton ginning, cleaning, and pressing factories. In the case of the latter, which have practically disappeared from the returns under this head, the decrease was more than counterbalanced by the increase under the head of factories worked by mechanical power.

It may be remarked here that the labour conditions in the large manufacturing industries of India are very different from those prevailing in western countries. The habits of the Indian factory operative are still determined by the fact that he is in almost all cases primarily an agriculturist or labourer on the land, and does not as a rule rely exclusively on factory employment for a livelihood. He is in consequence comparatively unskilled, and, on the other hand, his services being difficult to obtain, he is within wide limits allowed by his employers to work as he likes. The wages of operatives in textile factories are everywhere considerably higher than those earned by the same class of men in other employments.

Cotton Mills.—The first cotton mill in India was started in 1818, near Calcutta; the first of the Bombay series was established in 1851. Since the latter date the number of mills has steadily increased. The chief figures for the period now under review are given below:—

Cotton Mills worked by Mechanical Power.

Year.	Number of Mills.	Capital employed (so far as known).	Average Daily Number of Persons employed	Number of Looms.	Number of Spindles.	Yarn.			Woven Goods.*		
						Total Production.	Exports by Sea.	Imports by Sea (less re-exports).	Total Production.	Exports by Sea.	Imports by Sea (less re-exports).
British India.		£				Millions of Lbs.	Millions of Lbs.	Millions of Lbs.	Millions of Lbs.	Millions of Yds.	Millions of Yds.
1901-02 - -	179	10,562,000	161,756	38,891	4,743,391	560	272	37	116	73	2,119
1902-03 - -	184	10,735,000	167,104	40,397	4,895,884	559	249	32	117	70	2,054
1903-04 - -	187	10,428,000	169,837	41,977	4,900,106	556	252	27	132	76	1,968
1904-05 - -	187	10,762,000	178,680	43,740	4,912,382	556	248	29	153	87	2,228
1905-06 - -	188	10,509,000	194,700	48,550	5,006,916	656	298	45	157	92	2,399
									Millions of Yds.		
1906-07 - -	197	11,513,000	197,980	55,291	5,230,020	631	244	37	682†	77	2,258
1907-08 - -	207	12,032,000	208,422	62,251	5,437,198	614	216	36	778	74	2,471
1908-09 - -	212	12,604,000	220,443	69,791	5,623,542	630	235	41	793	78	1,945
1909-10 - -	223	12,725,000	215,950	74,757	5,780,124	593	227	39	910	94	2,143
1910-11 - -	230	13,437,000	214,142	78,984	5,961,950	577	183	32	981	100	2,242
1911-12 - -	234	13,799,000	221,076	81,899	6,040,760	591	151	41	1,079	81	2,364
Native States and Foreign Territory									Millions of Lbs.		
1901-02 - -	18	763,000	12,282	2,924	248,858	13	—	—	4	—	—
1911-12 - -	24	1,477,000	15,771	5,741	386,421	34	—	—	15	—	—

* Figures in yards are for piece-goods only, excluding hosiery, &c. † Equivalent to 157 million lbs.

The cotton industry centres in Bombay, and more particularly in Bombay City and Ahmedabad. The Presidency as a whole contains two-thirds of the total number of mills, nearly three-quarters of the spindles, and more than three-quarters of the looms. Madras, Bengal, and the United Provinces, with about equal numbers of mills, come next in order of importance, followed by the Central Provinces and the Punjab.

One of the first points brought out by the figures given above is that weaving advanced during the decade much more rapidly than spinning. While the number of looms and their output were, roughly speaking, doubled, the number of spindles increased by only about a quarter, and the output of yarn, after rising considerably, fell off again. The same point is illustrated by the fact that whereas the number of mills devoted exclusively to spinning fell from 107 in 1902 to 103 in 1912, mills devoted exclusively to weaving increased from 4 to 19, and those in which both spinning and weaving were carried on from 81 to 136. A large majority of the mills are owned by joint-stock companies. Almost the whole of their capital has been raised in India, and the industry is largely in the hands of Indians.

As regards the spinning business, the chief further points to be noticed are a considerable increase in the production of yarns of the higher counts, and a falling off in the export trade in the closing years of the decade. The proportion of yarns of counts higher than 25 was in 1911–12 over 10 per cent. of the total production, as compared with less than 5 per cent. in the five years ending with 1900–01. The finer yarns are spun largely from imported cotton. In 1911–12 the imports of raw cotton, mostly American, increased greatly, as noted in the next chapter, and exceeded 8 per cent. of the total mill consumption. These facts, together with the corporate effort being made by certain Bombay millowners to encourage the growth of superior cotton in India, indicate the trend of the industry. The fluctuations in the export trade depend chiefly on the demand from China, which takes the great bulk of the yarns exported. The year 1901–02 was one of rapid recovery, famine in India and the collapse of the Chinese markets having greatly restricted production in the preceding year. The next three years were marked by stagnation. In 1905–06 production, stimulated by the cheapening of the raw material and generally favourable conditions in the Chinese market, reached a maximum. In the succeeding years there was a shrinkage, partly due to the unprecedented rise in the price of raw cotton in 1909–10. The year 1911–12, one of the features of which was the fall in the price of raw cotton, opened badly for Indian spinners. Later on, the fall in the price of the raw material, synchronising with improved conditions in China, evoked an exceptional demand, but almost immediately after heavy contracts had been made for shipment, the revolution in China created a situation which was saved only by the development of an exceptional internal demand. The output was estimated to be about 75 per cent. of the maximum of which the industry is capable. The import of yarn, mostly of counts above 25, is small in comparison with the local production.

Weaving is concentrated to an even greater degree than spinning in the Bombay mills, which produce about 87 per cent. of the total output of woven goods. More than three-quarters of the output still consists of grey (unbleached) goods, though there has been a marked increase in the production of coloured piece-goods. The weaving mills were less affected than the spinning mills by the high price of raw cotton in 1903–04, for there was a considerable advance in the price of cloth, both the home and the foreign demand being good, and in the following year high prices were still realised when the price of raw cotton had fallen to normal levels. The exports of Indian cotton manufactures, for which the Straits Settlements and Ceylon are the best customers, showed a very satisfactory increase in the closing years of the decade. The imports of piece-goods are still much larger than the local production, but the latter supplies a steadily increasing proportion of the total Indian demand. The year 1911–12 was fairly good throughout for the weaving industry, and towards the close very profitable. The production of cloth was the largest on record, increasing by 9 per cent.

Of the total number of persons employed at the end of the decade in the cotton mills, about two-thirds were men, rather more than a half of the remainder being women, and the rest children or "young persons" (who are shown separately in the returns of cotton and jute mills, though not distinguished by the Indian Factories Act).

Jute Mills.—The jute industry, which is to Calcutta what the cotton industry is to Bombay, also dates, as an organised industry, from about the middle of the last

(Other large Industries.)

—	1901–02.	1910–11.	1911–12.
Number of mills at work -	36	58	59
Nominal capital employed (so far as known).	£4,642,000	£7,667,000	£7,950,000
Persons employed - -	114,795	216,390	201,324
Looms - - - - -	16,119	33,169	32,927
Spindles - - - -	331,382	682,527	677,519

century. Its position is essentially different from that of the cotton industry in that Bengal has a practical monopoly of the cultivation of the raw material, and that the imports of jute manufactures are insignificant by comparison with the exports; it differs also in that the industry is largely in European hands, and more than a third of the capital is sterling capital. The record of the jute industry is one of almost uninterrupted progress. The figures in the margin show how greatly it expanded during the period under review. Practically all the mills are in Bengal, in the neighbourhood of Calcutta; in 1911–12 the only mills outside Bengal were two in Madras. As in the case of the cotton mills, about two-thirds of the persons employed in the mills are men.

The output of the jute mills is not measured; a considerable proportion of the jute manufactures—estimated some years ago at about a third—is utilised locally. The exports fluctuate considerably; their total value was £5,808,000 in 1901–02 and £10,671,000 in 1911–12, the exports of raw jute in the same years being 14·8 million cwt., valued at £7,865,000, and 16·2 million cwt., valued at £15,038,000 respectively. The prices of raw jute fluctuated greatly during the decade. The manufactured exports consist almost entirely of gunny bags and gunny cloth. Taking the figures for quantities, the exports of the former, after remaining between 200 and 230 millions up to 1905–06, rose rapidly to 364 millions in 1909–10, to fall again to 290 millions in 1911–12. The exports of cloth, on the other hand, rose steadily from 419 million yards in 1901–02 to 955 million yards in 1910–11, though they fell back somewhat—to 871 million yards—in 1911–12. The largest buyers of bags are Australia, the United States, and Chile. The greater part of the cloth—about two-thirds of the total export—goes to the United States.

In the last few years of the period under review the jute industry was depressed, and there were signs that the erection of new and the extension of old factories, with the resultant increases in output, had not been altogether a healthy growth. Short time was worked, by agreement, for some periods. The cold weather of 1911–12 was notable for an effort to organise combination on a more comprehensive scale than had previously been attempted; but the effort synchronised with a revival of trade and was abandoned as unnecessary. The year closed with business active and prices favourable.

Other Mills and Factories.—None of the other manufacturing industries of India at present approaches the cotton and jute industries in importance. The table in the margin, the figures in which are taken from the returns of "factories" and other large industries" shows how some of the most important of the remaining industries (judged by the numbers of persons employed) stood at the beginning and end of the decade. The figures are for British India. The returns from native states and foreign territory are incomplete; so far as they go, they showed in 1911 some 310 works, principally cotton ginning, cleaning, and pressing mills,

—	1903.		1911.	
	Number of Works.	Persons Employed.	Number of Works.	Persons Employed.
Worked by mechanical power :—				
Cotton ginning, cleaning, and pressing mills - - - -	610	44,781	1,166	89,751
Jute presses - - - -	94	16,278	115	30,207
Iron and brass foundries - -	58	21,103	85	24,151
Railway workshops and factories -	45	47,934	59	72,965
Rice mills - - - - -	116	15,687	219	21,010
Indigo factories - - - -	57	57,000	49	16,510
Printing presses - - - -	56	11,174	60	13,237
Not worked by mechanical power :—				
Cotton ginning, cleaning, and pressing factories - - -	248	20,034	2	136
Indigo factories - - - -	364	72,191	63	16,539
Tile factories - - - -	21	2,893	111	18,041
Lac factories - - - -	68	6,302	39	4,492

employing altogether about 55,000 persons. Factories owned by Government and local bodies in British India are also excluded from the table. The only works under this head employing large numbers are railway workshops, arms and ammunition factories, and printing presses, employing respectively about 23,000, 10,000, and 9,000 persons.

It is only possible to glance at the geographical distribution of the various industries. The factory population is largest in Bengal, where, besides the jute mills and presses, there is a great variety of industries employing a few hundreds or thousands of persons each. Iron and brass foundries, tile factories, paper mills and silk filatures are most prominent in this part of India. Bombay takes second place, as a result mainly of its predominance in the cotton industry. The other provinces follow at a considerable distance, Madras and the United Provinces coming next, the former with some 65,000 persons employed in "factories and other large industries." Cotton mills and sugar factories are of some importance in both provinces, tobacco factories and tile factories in Madras, and woollen mills, leather works, and indigo factories in the United Provinces. Bihar and Orissa returns sugar, tobacco, indigo, and lac factories. The Central Provinces have little beyond cotton mills. The Punjab has cotton mills, woollen mills, and carpet-weaving establishments, and has also more flour mills than any other province, though they employ only about a thousand persons. Assam returns a petroleum refinery and a few saw-mills. In Burma the chief features are rice mills, petroleum refineries, and saw-mills, in respect of each of which Burma easily predominates over the whole of the rest of India.

With some exceptions, of which indigo factories and silk filatures are the most noticeable, the numbers of works and of persons employed show a general upward tendency, though the totals fell off somewhat in 1911.

With regard to woollen mills, paper mills, and breweries, fuller returns are available. These show that the woollen mills made some progress during the decade, though there were marked fluctuations. The number of mills (including one in Mysore) was in 1912 five, as against four in 1902, the number of persons employed 3,706 as against 2,854, and the value of the output £340,000 as against £188,000. The total numbers of looms and spindles were considerably increased. The mills weave cloth for the army and police, and articles of superior quality generally, using Australian wool to a large extent for the latter. The returns of the paper mills show no steady increase in the number of persons employed—between 4,000 and 5,000—though the quantity of paper produced has increased. The increase in the output of the Indian mills has been less rapid than that in the imports, the competition of cheap wood-pulp paper from Europe having checked the development of paper making by older methods in India. The returns of the breweries show a decline since 1902, when 27 breweries produced nearly 6½ million gallons. In 1911, 25 breweries employed 1,520 persons and produced 4 million gallons.

The Tata Iron and Steel Works.—Of the various industrial developments of the decade one of the most striking, from more than one point of view, was the establishment of the works of the Tata Iron and Steel Company in Bengal.* Iron ores are widely distributed in India, but smelting after European methods has only been carried on in Bengal, where coal is found in proximity to the ore, and before the formation of the new company was carried on only by one company, whose production was practically confined to pig-iron, though steel plant was laid down in 1904, with the aid of a subsidy from Government, and was worked for a time. The scheme for the establishment of a large iron and steel industry on a scientific basis owed its inception to Mr. J. N. Tata, who may be said to have been the pioneer among Indians in the scientific organisation of industries. The Tata Iron and Steel Company was floated in 1907, with exclusively Indian capital of over £1,500,000, and an Indian board of directors. After detailed preliminary inquiries, a lease of 20 square miles of iron-ore lands in Orissa was secured, and arrangements were made for the erection of blast furnaces and steel rolling mills at a point, some 150 miles west of Calcutta, where the raw materials—ore, coal, and flux—could be most advantageously assembled. The Government of India gave assistance in various ways to this important project, and undertook to purchase annually for a minimum period of 10 years at least 20,000 tons of steel rails, subject to the Government specifications being complied with and prices comparing favourably with those at which similar rails could be imported. On the chosen site the new town of Sakchi has been laid out for a population of 15,000 people. The first blast furnace was started in December 1911, and the steel plant in February 1912.

* In the Singhbhum district, now included in Bihar and Orissa.

(Other large Industries.)

It is reported that the rated capacity of the steel works is put down at 90,000 tons a year, employing 2,000 workers, including 160 Europeans.

The first effect of the company's operations was seen in the returns of mineral production for 1911, the extraction by them of 300,000 tons of ore being mainly responsible for the increase in the total output of iron ore in India from 54,626 tons in 1910 to 366,180 tons in 1911. The manufacturing operations of the company are reported to have made a good beginning.

Factory Legislation and Inspection.

The conditions of factory labour were regulated throughout the period under review by the Indian Factories Act of 1881, as amended in 1891. The chief provisions of the amended Act were briefly as follows:—A factory, for the purposes of the Act, meant any premises (other than indigo factories, and those on tea and coffee plantations) in which manufacturing processes were carried on for not less than four months in the year, with the aid of mechanical power, and in which not less than 50 persons were employed The Act could be extended by local Governments to establishments in which not less than 20 persons were employed. Local Governments were empowered to appoint inspectors of factories, and certifying surgeons to certify as to the age of children. A mid-day stoppage of work was prescribed in all factories, except those worked on an approved system of shifts, and Sunday labour was prohibited, subject to certain exceptions. The hours of employment for women were limited to 11, with intervals of rest amounting to at least an hour and a half; their employment between 8 p.m. and 5 a.m. was prohibited, as a general rule, except in factories worked by shifts. The hours of work for children (defined as persons below the age of 14) were limited to seven, and their employment at night time was forbidden; children below the age of nine were not to be employed. Provision was made for the fencing of machinery and for the promulgation of rules as to water supply, ventilation, the prevention of overcrowding, &c. The Act of 1881 was repealed by the Indian Factories Act of 1911, which, however, did not come into force until the 1st July 1912.

The decision to undertake further legislation was arrived at after comprehensive inquiries, the results of which were laid before Parliament at the time.

An important factor in the case was the increasing use of electric light in the Bombay mills, which had radically changed the conditions prevailing when the Act of 1891 was passed and had abolished the security that operatives would not be employed for more than 12 hours a day on the average. The question of the hours of employment in textile factories was brought into prominence by the period of prosperity that the cotton industry began to enjoy in the cold weather of 1904–05, a large number of operatives being regularly worked for 15 hours a day or even longer.

Owing to complaints regarding the long hours worked in many mills, the Government of India in 1906 appointed a small Committee, with Commander Sir H. P. Freer-Smith, R.N., late Superintending Inspector for Dangerous Trades in England, as chairman, to conduct a preliminary inquiry into the conditions of labour in textile factories. The Committee recommended that the working hours of adult males should be limited to 12 hours a day; that certificates of age and physical fitness should be required prior to half-time employment and prior to employment as an adult; that night-work of women should be prohibited; and that whole-time Medical Inspectors should be appointed. The Committee's report was presented to Parliament in 1907 (Cd. 3617).

The conclusions of this Committee formed the basis of an investigation, extending to all factories in India, by a representative Commission, whose report was presented to Parliament in 1908 (Cd. 4292). This report disclosed the existence of abuses, particularly in connection with the employment of children, and the excessive hours worked by operatives generally, in textile factories. The majority of the Commission deprecated a statutory limitation of the working hours of male adults. But they recommended the formation of a class of "young persons," between 14 and 17 years of age, whose hours should be limited to 12, and considered that this would indirectly secure a 12 hours' day for male adults. They also recommended that the hours of work for children should be reduced from 7 to 6 hours and that the hours for women should be assimilated to those for "young persons," night-work being prohibited for both classes. They recommended that children should be certified as to age and physical fitness.

(Factory Legislation and Inspection.)

The Indian Factories Act, 1911.—The recommendations of the Committee and of the Commission having been considered by the Government of India and the local Governments, a Bill was introduced in July 1909 to amend and consolidate the law relating to factories, and was finally passed into law as Act XII. of 1911.

The new Act, which, as already mentioned, came into force after the end of the period now under review, extended the definition of "factory" so as to include seasonal factories working for less than four months in the year, shortened the hours within which children (and, as a general rule, women) may be employed, and further restricted the employment of women by night by allowing it only in the case of cotton-ginning and pressing factories. It also contained a number of new provisions for securing the health and safety of the operatives, making inspection more effective, and securing generally the better administration of the Act. The most important feature of the Act, however, was the introduction of a number of special provisions applicable only to textile factories. The report of the Factory Commission showed that excessive hours were not worked except in textile factories. The Act for the first time applied a statutory restriction to the hours of employment of adult males by laying down that, subject to certain exceptions, "no person shall be employed in any textile factory for more than 12 hours in any one day." It is also provided in the case of textile factories that no child may be employed for more than six hours in any one day, and that (subject to certain exceptions, among which are factories worked in accordance with an approved system of shifts) no person may be employed before 5.30 a.m. or after 7 p.m. (the new limits laid down generally for the employment of women and children). Corresponding limitations are placed on the period for which mechanical or electrical power may be used.

Factory Inspection.—The inquiries of the Factory Commission showed that the then existing system of factory inspection had not sufficed to prevent widespread evasion of the provisions of the factory law. This result was attributed to the fact that the number of full-time factory inspectors was very small, the work of inspection being to a large extent in the hands of *ex officio* inspectors (district magistrates, civil surgeons, &c.) who, as the Commission reported, had neither the time nor the special knowledge necessary for the work. In Bombay Presidency, where there were three special inspectors, it was reported that the Act was, on the whole, well enforced. Steps have been taken since to reorganise the staff of whole-time inspectors of factories in India and to increase it to a strength sufficient to cope with the work of inspecting all the factories in India. The total strength of the staff is now 14, as compared with 6 at the time of the Factory Commission's report. Each of the larger provinces has at least one inspector, Bombay having five. Except that in a few cases these officers have duties also in connection with boiler inspection, their whole time is given to factory inspection. The District Magistrate remains an inspector, *ex officio*, under the new Act, and other officers may be appointed additional inspectors, but it is contemplated that inspection by *ex officio* inspectors will be to a large extent discontinued, or limited to special cases.

The reports on factory inspection in 1911 do not call for detailed notice. The returns show 133 factories as having escaped inspection altogether, the largest numbers being in the Punjab and Central Provinces. Nearly half of the total number of factories were inspected more than three times, and the proportion was considerably higher in Bengal and Bombay. Irregularities in connection with the employment of women and children continued to be reported from some provinces. In Bengal and the Central Provinces cases were detected in which children were hurried off the premises on the appearance of an inspector, and in Bombay it was discovered that children were in some cases employed as half-timers in two separate mills. In the Punjab it was reported that the provisions of the Act as to the hours of employment of women were rarely observed, though it was difficult to detect individual offences, and that children under 14 were commonly worked as whole-timers; in view, however, of the impending introduction of the new Act and appointment of a whole-time factory and boiler inspector, it was thought inadvisable to institute many prosecutions under the old Act. It is hoped that the introduction of the new Act and the reorganisation of the factory inspection staff will remedy defects and check irregularities. The sanitary condition of the factories was reported in 1911 to be generally satisfactory and the health and condition of the operatives on the whole good. A committee was appointed to inquire into the question of ventilation in Bombay, where it was reported that satisfactory

ventilation was still the exception and not the rule in most spinning and weaving factories. Fatal accidents were, as in previous years, due in most cases to carelessness on the part of the victims themselves. Few of them could be attributed to defective guarding of machinery.

Statistics.—The statistics of factories coming within the scope of the Act in 1911, with the totals for previous years, are given below :—

Province.	Number of Factories working and liable to be inspected.	Average Number of Hands employed daily.				Number of Factories.				Number of Persons convicted for breach of Act.	Number of Accidents reported.			
		Men.	Women.	Children.	Total.	With Sunday Holiday.	With other Weekly Holidays.	Exempted from Sunday Stoppage.	Worked otherwise.		Fatal.	Serious.	Minor.	Total.
Bengal	320	240,217	37,756	26,013	303,983	210	20	27	56	16	38	403	541	982
Bihar and Orissa	25	15,211	1,112	311	16,634	24	—	—	—	—	6	65	110	181
United Provinces	169	41,441	4,763	1,848	48,052	130	15	23	—	5	7	97	194	298
Punjab	205	24,034	3,456	694	28,184	149	50	6	—	1	8	46	204	258
North-West Frontier Province	5	147	88	—	235	4	1	—	—	—	1	1	1	3
Burma	280	41,660	1,484	640	43,784	222	41	11	6	2	9	129	247	385
Central Provinces and Berar	429*	25,034	15,103	1,701	41,838	184	178	1	—	15	12	50	105	167
Assam	18	2,362	429	180	2,971	18	—	—	—	—	3	—	2	5
Ajmer-Merwara	9	10,869	514	227	11,610	5	4	—	—	—	—	20	116	136
Madras	203	46,057	6,468	4,784	57,309	174	14	6	9	2	4	48	256	308
Bombay	585	182,195	43,917	11,232	237,344	371	185	2	2	25	20	126	1,353	1,499
TOTAL, 1911	2,248	629,227	115,090	47,627	791,944	1,491	509	76	73	66	108	985	3,129	4,222
1910	2,271	624,945	115,540	52,026	792,511	1,448	555	100	62	70	139	886	3,354	4,379
1909	2,204	619,015	114,455	52,540	785,910	1,410	508	80	83	58	123	897	3,016	4,036
1908	1,981	606,296	107,709	52,145	766,150	1,348	441	70	65	60	128	891	2,680	3,699
1907	1,866	576,767	103,764	49,247	729,778	1,294	437	66	70	36	120	832	2,797	3,749
1906	1,732	546,693	102,796	41,223	690,712	1,253	384	59	41	28	86	738	2,739	3,563
1905	1,545	501,227	93,431	37,978	632,636	1,133	305	56	40	22	111	499	2,642	3,252
1904	1,449	466,721	85,221	35,618	587,560	1,004	314	72	44	22	91	586	2,383	3,060
1903	1,391	437,872	82,453	33,097	553,422	967	318	65	25	21	85	558	2,320	2,963
1902	1,302	416,493	79,779	31,345	527,617	910	270	69	33	17	95	488	2,503	3,086
1901	1,259	408,950	75,803	29,463	514,216	915	309	67	53	22	92	442	2,422	2,956

* This figure includes 66 factories that remained closed during the year. The figures for some other provinces also appear to include a smaller number of factories that remained closed.

The figures are not altogether complete, particulars regarding a few factories not being available.

Of the children shown as employed during the last year, 39,450 were boys and 8,177 girls. The majority of the factories were worked with mid-day stoppages, about one-fifth being worked by shifts and a smaller number by shifts and mid-day stoppages or other arrangements.

Inventions and Designs.

The chief feature of the decade under this head was the replacement of the Inventions and Designs Act (No. V.) of 1888 by the Indian Patents and Designs Act (No. II.) of 1911, which came into force on the 1st January 1912. The object of the Act was to provide a simpler, more direct, and more effective procedure in regard both to the grant of patent rights and to their subsequent existence and operation. The changes made in the law need not here be referred to in detail. They gave further protection both to the inventor, by providing that his application should be kept secret until acceptance, and to the public, by increasing the facilities for opposition at an effective period. At the same time a Controller of Patents and Designs was established, with power to dispose of many matters previously referred to the Governor-General in Council, and provision was made for the grant of a sealed "patent" instead of for the mere recognition of an "exclusive privilege." Generally speaking, the provisions of the Act follow with the necessary modifications those of the British Inventions and Designs Act of 1907.

The records of proceedings under the Act of 1888 show a steady, though not very rapid, increase in recent years in the number of applications for leave to file specifications. The number of applications received increased from 524 in 1902 to 807 in 1911, and the number of specifications filed (*i.e.*, of "exclusive privileges" acquired) from 375 to 605. The total number of applications under the Act up to the end of 1911 was 11,679, as the result of which 9,113 specifications were filed. The number of patents in force at the end of 1911 was 2,917. Only a small proportion of the applications—some 60 or 70 a year—came during the decade from Indians. The majority came from persons not resident in India. The range of inventions for which protection was sought was very wide, inventions connected with railways, electrical contrivances, and chemical appliances and preparations being most numerous.

The number of applications to register copyright in designs is relatively very small. There were 87 in 1911.

CHAPTER XVII. (Trade and Commerce.)

TRADE AND COMMERCE.

Constitution of the Department of Commerce and Industry.—Important steps were taken in 1905 in the direction of bringing Government more closely into touch with the interests of trade. Since 1875 considerable advances had been effected in the methods of collecting and publishing statistics relating to production and trade; but the complaint had commonly been made by those engaged in commerce in India that Government was indifferent to trade interests, and that commercial questions referred to it were unduly delayed. Trade and commerce generally were dealt with by the Finance and Commerce Department of the Government of India, but various subjects closely related to this general heading were allocated to the Home, Revenue and Agriculture, and Public Works Departments. In 1905 a separate Department of Commerce and Industry was formed to deal with these connected subjects, and placed in charge of a member of Council. Questions relating to commercial interests were thus concentrated in a single department, and their consideration and speedy settlement greatly facilitated. At the same time the Director-General of Statistics was replaced by a Director-General of Commercial Intelligence, who, besides controlling the preparation of statistics, was intended to act as an intermediary between the new Member and the mercantile public.

Total Foreign Trade.

The table on page 286 shows the total foreign trade of British India for each year of the period under review.

The sea-borne trade taken into account is the trade registered at British Indian ports between those ports and foreign countries. The foreign trade of ports in Native States is not recorded; owing to the absence of large harbours suitable for ocean-going steamers, and to the prohibition of direct transhipment at British ports, the total amount is small. Foreign merchandise transhipped at Indian ports is excluded from the accounts of both imports and exports; Indian ports are not transhipment centres for foreign countries to any considerable extent. The imports include goods landed, whether they are intended for home consumption, bonding, or re-exportation, and such articles in passengers' luggage as are dutiable. Articles received from and despatched to foreign countries by parcel post are included, but, with certain exceptions, the contents of foreign registered letters received and despatched are not included.

The land trade is that registered at stations in or near the external land frontiers. The statistics, especially those relating to treasure, are very imperfect, and a great deal of the trade brought to account is not, properly speaking, foreign trade, the figures including trade with the Shan States, and with some of the frontier Native States, as well as with the tribal territories on the north-west frontier.

The period under review saw a great expansion of India's foreign trade, and stood in this respect in marked contrast with the preceding decade, which was one of comparative stagnation. The marginal figures (for private merchandise only, values being converted throughout at the rate of 15 rupees to the £) show how the foreign sea-borne trade of India has increased in recent years. India being a debtor country, the total exports always exceed the total imports, though the amount of the excess varies very greatly; in 1907–08 and 1908–09 it was less, and in the three closing years of the decade greater, than in any year in the preceding decade. The increase in the net imports of treasure is as noticeable as the steady growth of both imports and exports of merchandise; in no year of the preceding decade did the net imports of treasure reach £10,000,000.

	Imports.	Exports of Indian Merchandise.
Average—	000£	000£
1880–1 to 1884–5	33,754	52,964
1885–6 „ 1889–90	40,798	59,168
1890–1 „ 1894–5	45,647	67,623
1895–6 „ 1899–1900	46,956	69,100
1900–1 „ 1904–5	55,745	87,336
1905–6 „ 1909–10	77,297	111,943
For the year 1910–11	86,236	137,081
„ „ 1911–12	92,383	147,878

The trading power of India depends primarily on the success of her crops, climatic conditions thus determining both the volume of exportable produce and the capacity to purchase imports. Produce is in many cases exported in the official year following that in which it is grown. The operation of these factors is shown by the

(Total Foreign Trade.)

set-back of trade in 1908–09, when, however, the effects of the failure of the rains over large tracts in India in the preceding year were accentuated by the general stringency in trade that prevailed throughout the world.

A full review of the trade of India, by the Director-General of Commercial Intelligence in India, is laid before Parliament annually, and it is unnecessary to enter into great detail here. It will be convenient to treat the sea-borne and the land frontier branches of the foreign trade separately, the former being much more important, and the statistical returns relating to it much more accurate.

	1902-03.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.
SEA-BORNE TRADE.	£	£	£	£	£	£	£	£	£	£
Imports :										
Private Merchandise	52,525,272	56,548,862	64,452,192	68,722,713	72,205,055	86,669,735	80,849,618	78,040,286	86,236,011	92,383,255
Government Stores	4,687,504	5,179,320	5,156,305	6,019,781	5,956,410	4,428,635	5,008,302	3,727,226	2,901,152	3,653,703
Total - - -	57,212,776	61,728,182	69,608,497	74,742,494	78,161,465	91,098,370	85,857,920	81,767,512	89,137,163	96,036,958
Treasure :										
Private - -	16,837,152	21,295,508	22,018,353	13,947,526	18,133,990	21,880,286	15,087,902	24,950,716	26,444,723	35,614,729
Government -	82,085	4,388,564	4,320,430	7,153,150	11,585,884	6,309,379	74,876	64,933	45,853	32,503
Total Treasure -	16,919,237	25,684,072	26,338,783	21,100,676	29,719,874	28,189,665	15,162,778	25,015,649	26,490,576	35,647,232
Total Imports -	74,132,013	87,412,254	95,947,280	95,843,170	107,881,339	119,288,035	101,020,698	106,783,161	115,627,739	131,684,190
Exports :										
Private Merchandise:										
Indian Produce and Manufactures.	83,919,801	99,755,597	102,760,848	105,459,482	115,625,135	115,727,126	99,904,842	122,997,605	137,080,646	147,878,013
Foreign Produce and Manufactures.	1,957,108	2,217,458	2,248,715	2,352,540	2,322,693	2,511,557	2,113,820	2,259,090	2,840,700	4,018,100
Total Private Merchandise.	85,876,909	101,973,055	105,009,563	107,812,022	117,947,828	118,238,683	102,018,662	125,256,695	139,921,346	151,896,113
Government Stores	387,490	371,718	158,472	78,392	71,940	84,922	76,801	55,428	53,056	96,041
Total - - -	86,264,399	102,344,773	105,148,035	107,890,414	118,019,768	118,323,605	102,095,463	125,312,123	139,974,402	151,992,154
Treasure :										
Private - -	5,873,341	5,364,782	5,392,377	4,299,838	3,808,672	3,630,819	3,971,116	4,262,221	4,745,327	6,907,746
Government -	565,084	4,596,339	5,634,834	6,013,499	3,497	1,515	242,382	3,807	5,956	8,191
Total Treasure -	6,438,425	9,961,121	11,027,211	10,313,337	3,812,169	3,632,334	4,213,498	4,266,028	4,751,283	6,915,937
Total Exports -	92,702,824	112,305,894	116,175,246	118,203,751	121,831,937	121,955,939	106,308,961	129,578,151	144,725,685	158,908,091
Total Sea-borne Trade.	166,834,837	199,718,148	212,122,526	214,046,921	229,713,276	241,243,974	207,329,659	236,361,312	260,353,424	290,592,281
Net Exports of Merchandise (including Government Stores).	29,051,623	40,616,591	35,539,538	33,147,920	39,858,303	27,225,235	16,237,543	43,544,611	50,837,239	55,955,196
Net Imports of Treasure.	10,480,812	15,722,951	15,311,572	10,787,339	25,907,705	24,557,331	10,949,280	20,749,621	21,739,293	28,731,295
Excess of Exports	18,570,811	24,893,640	20,227,966	22,360,581	13,950,598	2,667,904	5,288,263	22,794,990	29,097,946	27,223,901
LAND TRADE.										
Imports :										
Merchandise - -	3,373,849	3,827,075	3,886,566	4,454,267	4,524,201	4,930,458	4,829,268	4,835,736	5,329,807	6,233,274
Treasure - -	424,760	377,865	520,770	700,367	626,510	739,890	696,577	802,176	797,397	686,722
Total Imports -	3,798,609	4,204,940	4,407,336	5,154,634	5,150,711	5,670,348	5,525,845	5,637,912	6,127,204	6,919,996
Exports :										
Merchandise - -	2,819,402	2,763,979	3,281,859	3,498,105	3,547,369	4,076,454	4,144,137	4,012,703	4,325,790	5,273,518
Treasure - -	240,865	356,517	418,486	494,261	727,965	566,376	496,157	531,914	624,276	611,590
Total Exports -	3,060,267	3,120,496	3,700,345	3,992,366	4,275,334	4,642,830	4,640,294	4,544,617	4,950,066	5,885,108
Total Land Trade	6,858,876	7,325,436	8,107,681	9,147,000	9,426,045	10,313,178	10,166,139	10,182,529	11,077,270	12,805,104

Sea-borne Trade.

It is proposed to deal first, and principally, with trade in merchandise on private account, passing then to a brief notice of Government transactions and treasure movements.

Imports of Private Merchandise.—The following table shows the value of the imports on private account under the most important heads for each of the 10 years :—

(Sea-borne Trade.)

Figures in Thousands of Pounds Sterling, 000 being omitted.

—	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
Cotton :										
Raw	113	34	426	360	306	473	354	224	128	1,391
Twist and yarn	1,532	1,428	1,658	2,284	2,149	2,462	2,433	2,213	2,092	2,527
Manufactures	18,766	19,246	23,706	26,012	25,130	29,566	22,911	24,034	27,802	30,520
Sugar	3,303	3,957	4,602	5,183	5,825	6,151	7,271	7,681	8,777	7,955
Railway plant and rolling-stock	1,074	935	940	1,082	2,772	4,801	4,947	3,627	2,830	2,958
Machinery and mill-work	1,869	2,235	2,685	3,284	3,860	4,450	4,415	3,375	3,154	2,838
Iron	2,020	2,254	2,523	2,272	2,879	3,318	3,173	3,313	3,311	3,671
Steel	1,370	1,747	1,560	2,157	2,166	3,190	2,856	2,581	2,984	3,045
Copper	1,308	1,446	1,406	956	929	1,376	1,814	1,762	2,473	1,853
Hardware, cutlery, implements, &c.	1,333	1,552	1,586	1,510	1,769	2,111	1,951	1,844	2,231	2,379
Mineral oils	2,310	2,300	2,217	1,491	1,618	2,127	2,603	2,088	2,249	2,818
Provisions	1,227	1,352	1,444	1,590	1,616	1,827	1,875	1,933	2,020	2,127
Silk :										
Raw	368	395	489	475	379	654	679	651	568	706
Manufactures	1,088	1,222	1,412	1,268	1,217	1,423	1,521	1,511	1,843	1,769
Liquors	1,180	1,218	1,249	1,335	1,238	1,337	1,323	1,276	1,265	1,293
Apparel	1,188	1,331	1,493	1,479	1,408	1,722	1,612	1,588	2,065	2,355
Wool :										
Raw	53	44	45	61	58	76	53	72	107	93
Manufactures	937	1,440	2,051	1,617	1,368	1,845	1,941	1,387	2,013	2,272
Tobacco :										
Unmanufactured	22	21	23	28	40	42	43	78	16	12
Manufactured	276	310	348	413	442	520	486	554	311	433

Tobacco is included in the table in view of the changes made in the import duties in 1910 and 1911. So far as the value of the trade goes, tobacco comes below some other heads of imports that are not included. The chief feature of the import trade is the predominance of manufactured goods.

Cotton.—The imports of raw cotton, though hitherto small, present some points of special interest, and the increase under this head was one of the most marked features of the trade of 1911–12. It arose from the abundance and relative cheapness of American and Egyptian supplies, but it further indicated the activity and the improved spinning efficiency of the Indian mills and the demand for finer staples, the foreign cottons being used for spinning the finer counts of yarn.

Cotton yarns, the imports of which show no very marked tendency to increase (the figures in the opening years of the decade were abnormally low), come almost exclusively from the United Kingdom. Holland and Switzerland, in 1911–12, accounted for quantities valued at £75,000 and £74,000 respectively, while Japan, which up to 1910 sent practically no yarn to India, made a notable advance in taking fourth place with £51,000 worth.

Manufactured cotton goods constitute by far the most important class of imports, accounting for approximately a third of the total import trade. The figures by quantities, for piece-goods, were given in the last chapter*; they show that the actual increase of imports has not been so great as the figures by value suggest. As in the preceding decade, the imports of grey (unbleached) goods showed no marked increase, and made up in 1911–12 only 50 per cent. of the total of piece-goods, as compared with 57 per cent. in the four years ending with 1903–04. White and coloured goods advanced fairly steadily. Taking cotton manufactures as a whole, the United Kingdom, in 1911–12, supplied over 92 per cent. of the total, and the percentages were higher in the case of piece-goods. Among other countries, Japan has made the most marked advance, sending goods to the value of £453,000 in 1911–12, as against £8,000 in 1902–03. The imports from Japan consist almost entirely of hosiery, the great bulk of the trade under this head being now in the hands of that country.

Sugar.—The imports of sugar are of special interest, by reason of their bearing on the question of sugar cultivation in India, and also in view of the competition between cane and beet sugar and the imposition of countervailing duties on bounty-fed sugar about the beginning of the period under review.† As regards the first point, it is a striking fact that India, which is estimated to produce some 3,000,000 tons of cane-sugar a year, and is thus the largest single producer of sugar in the world, at the same time imports large and increasing quantities, amounting in 1910–11, when the figures were the highest so far recorded, to nearly 10 per cent. of the total supply of cane-sugar outside India. The following table, which gives the sugar imports,

* Page 278. † *See* page 216.

(Sea-borne Trade.)

excluding molasses and confectionery, in each year, shows that the character of the import trade underwent remarkable changes during the decade :—

Imports of Sugar in Thousands of Cwts., 000 being omitted.

	1901–02.	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
Cane-sugar :—											
From Java - -	447	574	1,336	2,546	2,007	3,467	6,594	6,472	7,815	8,759	8,160
„ Mauritius -	1,759	1,916	2,617	1,824	2,014	2,310	2,600	2,514	2,436	2,924	1,710
„ other countries	423	1,040	1,532	463	242	149	57	33	26	131	17
Total - -	2,629	3,530	5,485	4,833	4,263	5,927	9,251	8,719	10,277	11,814	9,888
Beet-sugar :—											
From Austria - Hungary.	2,258	888	299	1,505	2,454	2,017	730	1,918	783	714	241
„ Germany -	577	146	7	151	630	1,658	52	3	52	8	10
„ other countries	101	424	246	60	349	129	12	23	25	3	3
Total - -	2,936	1,458	553	1,716	3,433	3,804	794	1,944	859	725	254

Note.—Up to and including 1903–04 countries are countries of shipment, in later years countries of production.

The two points specially noticeable are the enormous increase in the imports of cane-sugar from Java, which represents a combination of cheap labour with the latest scientific methods of manufacture, and the contrast between the position of beet-sugar at the beginning and end of the decade. In 1901–02 beet-sugar, the imports of which first assumed importance in 1895–96, for the second time took the lead ; it was the heavy imports in 1897–98 that had led to the imposition of the countervailing duties in 1899. The imports of beet-sugar have since fluctuated greatly. The sudden drop in 1907–08 was attributed to a large extent to the shortage of the crop in Europe.

In 1911–12, as noted below, imported sugar to the value of over £1,100,000 was re-exported from India.

Railway Plant, Machinery, &c.—The figures for railway plant and rolling-stock quoted above do not include stores on Government account, which in 1911–12 brought the total under this head up to £4,638,000. The bulk of the trade under this head is with the United Kingdom ; the high figures in 1907–08 and 1908–09 were due to the heavy imports of rolling-stock. Machinery and mill-work also come mainly from the United Kingdom. Growth under this head was continuous up to 1908–09, and up to that time textile machinery held the first place. In 1909–10 all classes of machinery declined, and though in the next year all except textile machinery showed an improvement, there was in 1911–12 again a falling off under all heads except "electrical." This was due to a large extent to the depression in the jute industry.

Metals and Hardware.—The first point to be noticed as regards the imports of iron and steel, the most important metals, is that, taking the figures for weights, steel caught up iron for the first time in 1905–06, and has since gone well ahead, the total figures for 1911–12 being : steel, 370,000 tons ; iron, 314,000 tons. An increase in the proportion of imports coming from the United Kingdom is also noticeable under both heads. The figures are given in the margin. The comparison cannot be taken back beyond 1907–08, the first year in which the figures are given according to countries of consignment and not of shipment. The returns for earlier years credit Belgium with a much larger share of the trade.

	Percentages of Total Imports (by Value).			
	Steel.		Iron.	
	1907–08.	1911–12.	1907–08.	1911–12.
From United Kingdom -	46·5	49·3	79·6	81·9
„ Germany - -	26·0	25·7	6·5	3·8
„ Belgium - -	14·0	17·1	9·3	4·8
„ United States -	12·9	6·5	1·8	5·8

Copper is the only other imported metal (apart from treasure) the trade in which calls for special notice. The rise and fall of this trade have been said to constitute one

of the safest indications by which to judge the economic condition of the people of India. Copper, being the chief metal used for domestic utensils, and easily saleable when necessity arises, is in large demand in times of plenty, and is instantly thrown on the market in bad years. Recently the demands for electrical purposes have increased somewhat India's need for the metal, but the imports may be accepted as denoting roughly the amount required by the village coppersmiths. The application of the figures in the margin as a test of prosperity is, however, subject to qualifications. The demand is sensitive to changes of price, and the low figures for 1905–06 and 1906–07 were attributable to the high prices then prevailing for copper. The drop in 1911–12 also was not attributable to any decline in prosperity. It is interesting to note that during the years when the price of copper was so high, the imports of enamelled iron-ware made considerable advances, presumably indicative of the extent to which the common people had been compelled to replace their distinctive domestic utensils by cheap Austrian and German ware. On the return of copper prices to more normal levels, the importation of enamelled ware declined, but the upward movement was renewed in the last two years of the decade, and the imports in 1911–12, valued at £168,000, were greater even than those of 1907–08. Copper is imported mostly from the United Kingdom and Germany. The share of the United Kingdom in the hardware and cutlery trade, taken as a whole, was in 1911–12 nearly 60 per cent.

Imports of Copper.

	Cwts.
1902–03	395,850
1903–04	433,091
1904–05	427,233
1905–06	271,517
1906–07	211,959
1907–08	315,302
1908–09	496,405
1909–10	506,599
1910–11	732,914
1911–12	554,506

Other Articles.—The import trade in mineral oils underwent during the decade a change similar to that seen in the case of sugar, the United States gaining steadily on Russia, which by 1911–12 had fallen to fifth place among the importers of oil, Borneo, the United Kingdom, and the Straits Settlements all sending larger quantities. The figures for 1901–02 and 1911–12 are given in the margin. The falling off in Russian oil was in the first place attributed largely to disturbed conditions in the producing area; but the conditions of the petroleum trade were throughout the decade complicated by agreements and rate wars between the competing companies, into which it is impossible to enter here. It is to be noticed that in spite of the continually increasing production in Burma, and the raising of the import duty in 1910, the imports in 1911–12 were the largest on record. This was partly due to speculative buying induced by low rates. Among other features, the steady increase in the imports of raw silk, mostly coming from China to Bombay, is noticeable. The last feature to be noticed is the course of the import trade in tobacco in the closing years of the decade, which is of special interest in view of the changes made in the import duties in 1910 and 1911.* The figures are as follows:

Imports of Mineral Oils.

	1901–02.	1911–12.
	Gallons.	Gallons.
From United States	9,437,107	69,274,706
From Russia	84,514,016	2,922,582
Total from all countries	98,886,205	107,416,529

Imports of Tobacco.	1901–02.	1908–09.	1909–10.	1910–11.	1911–12.
Unmanufactured, *lbs.*	927,011	1,212,640	2,703,254	251,372	157,259
Manufactured:					
Cigars, *lbs.*	78,826	108,488	105,601	60,735	75,581
Cigarettes, *lbs.*:					
From United Kingdom	779,692	2,107,786	2,107,453	1,001,727	1,325,777
From United States	433,467	782,853	889,137	38,085	9,172
From Egypt	55,871	61,462	67,032	59,373	71,130
Total, all countries	1,510,287	2,995,692	3,083,746	1,113,005	1,414,830
Other sorts	1,900,564	1,240,543	1,436,055	377,958	557,193

The effect of the increased duties is in this case very evident. The rapid growth of the trade in imported cigarettes, which were hardly known to the native com-

* *See* page 216.

(Sea-borne Trade.)

munity a few years before the beginning of the decade, was a very conspicuous feature of its earlier years. The maximum was reached in 1907–08, when the import of cigarettes amounted to 3,634,192 lbs., estimated to be equivalent to 1,400 millions. The great bulk of the cigarettes were of low quality. The imposition of relatively high duties in February 1910 for some time stopped the trade in cheap imported cigarettes, and energetic steps were taken to replace them by cigarettes made in India from country leaf. The figures indicated that the contraction in the imports was for the most part in the lower qualities, with which the indigenous industry competes. Imports recovered to some extent after the reduction of the duties in 1911, but the imports from the United States fell further to a very low figure. The imports from Egypt, representing a different class of article, were not seriously affected by the additional duties.

Exports of Private Merchandise.—The value of the exports under the most important heads year by year is shown below:—

Figures in Thousands of Pounds Sterling, 000 being omitted.

	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
Exports of Indian Merchandise.										
Grain and Pulse	16,987	21,729	27,414	19,682	18,437	21,006	12,379	22,385	25,717	34,306
Including Rice	*12,595*	*12,722*	*13,079*	*12,423*	*12,350*	*13,558*	*10,592*	*12,162*	*15,488*	*19,367*
" Wheat	*3,010*	*7,393*	*11,937*	*5,690*	*4,836*	*5,723*	*893*	*8,473*	*8,638*	*8,899*
Cotton:										
Raw	9,838	16,251	11,623	14,228	14,652	17,135	13,179	20,955	24,037	19,684
Twist and yarn	5,693	5,894	6,544	8,258	6,931	5,982	6,454	6,473	5,749	5,060
Manufactures	978	1,087	1,218	1,359	1,181	1,196	1,238	1,471	1,592	1,459
Seeds	9,922	9,677	9,602	7,073	8,681	11,210	7,785	12,484	16,749	17,960
Jute:										
Raw	7,418	7,812	7,977	11,417	17,892	11,982	13,223	10,059	10,327	15,038
Manufactures	6,013	6,313	6,626	8,299	10,478	12,198	10,491	11,398	11,330	10,671
Hides and skins:										
Raw	3,691	3,891	4,703	6,732	7,263	4,701	5,559	6,434	5,996	6,296
Dressed or tanned	1,932	2,066	1,901	2,439	2,968	2,600	2,752	2,646	2,727	2,990
Opium	5,345	6,980	7,082	6,316	6,205	5,782	6,233	6,209	8,509	8,726
Tea	4,908	5,705	5,644	5,898	6,572	6,867	6,929	7,805	8,278	8,631
Wool:										
Raw	777	918	1,261	1,410	1,618	1,403	1,389	1,905	1,891	1,724
Manufactures	168	183	151	138	153	181	167	160	181	186
Lac (excluding lac dye)	1,234	1,816	2,051	2,120	2,333	2,722	1,863	1,848	1,429	1,343
Oils (all kinds)	572	687	669	545	466	572	630	806	941	1,072
Metals (excluding hardware and cutlery)	175	199	218	352	850	780	568	708	935	1,050
Coffee	881	912	1,107	1,171	664	743	927	731	888	897
Indigo	804	717	556	391	467	425	327	235	224	251
Re-exports of Imported Merchandise.										
Sugar	56	28	64	135	98	67	78	110	216	1,155
Cotton: Manufactures	722	866	835	898	843	929	714	749	1,015	1,176

The predominance of unmanufactured articles among the exports is as noticeable as their subordinate position among the imports.

Exports of Indian Merchandise.—*Grain and Pulse.*—This heading still takes the first place in ordinary years among those under which the Indian export trade is classified, though the advance of raw cotton has raised that head almost to the same level of importance, and oilseeds and raw jute are within measurable distance. By far the most important of the exports included under "grain and pulse" are rice and wheat, though millets and pulses, and barley, are exported in considerable quantities. The traffic in food-grains is very variable, depending on the character of the seasons. The fluctuations are very marked in the case of wheat, the margin between prices in India and in Europe being here an important additional factor; the rice trade is much less susceptible to the influence of the seasons, rice being grown for export mainly in Lower Burma, where failure of the rains is unknown; but the export to other countries is affected by conditions in other parts of India, bad seasons causing a diversion to India of rice that would ordinarily be exported from Burma to foreign markets.

Indian wheat is almost all shipped to Europe, mostly to the United Kingdom, which in 1911–12 took about 76 per cent. of the total exports. Rice, on the other hand, is exported to every quarter of the globe, India being the largest exporter of rice in the world. Ceylon, the Straits Settlements, and Germany take the largest quantities; the exports to Java increased greatly in the last two years of the decade, and in 1911–12, were valued at over £2,000,000, as in the case of the three countries

already mentioned. Holland, Austria-Hungary, and Japan all took more than £1,000,000 worth; while the share of the United Kingdom was rather less than this. The trade with Japan fluctuated greatly during the decade, reaching a maximum in 1904–05, when that country stood at the head of the list, and becoming an almost negligible quantity in 1909–10. In 1911–12 Japan was forced by a shortage of her own crop to increase her Indian purchases again.

The export trade in food-grains in 1911–12 was of dimensions much beyond anything attained in previous years. Wheat did not approach the level of 1904–05, when over 2,000,000 tons was exported; but the exports of rice—2,624,000 tons—were the largest on record, and the value rose more than proportionately, prices being high. The feature of the year, however, was an unprecedented increase in the trade in food-grains other than rice and wheat, the quantity exported being 1,083,285 tons, as against 225,470 tons in the previous year. To this greatly increased total the contributors were: barley, 292,000 tons, valued at £1,498,000; gram, 347,000 tons, valued at £1,832,000; *jawar* and *bajra*, 22,000 tons, valued at £128,000; oats, 800 tons, valued at £4,340; pulse, 276,000 tons, valued at £1,346,000; and "other sorts," which include maize, 145,000 tons, valued at £700,000. Except in the cases of *jawar* and *bajra* and oats, the figures were much above anything previously recorded.

Cotton.—The quantities of raw cotton exported show a steady upward tendency. The figures are given in the margin. It was shown in the last decennial number of this Statement how during the ten years then under review the exports to the United Kingdom (the ultimate destination of a great part of which, it should be mentioned, was continental Europe) had fallen to comparative insignificance, while the trade with Japan had very greatly increased. During the ten years ending with 1911–12 Japan retained the first place among importing countries, and Germany the second, with Belgium and Italy following. In 1911–12 the exports to Japan were exceptionally high, amounting to nearly half of the total exports. Exports to the United Kingdom showed some expansion, but only in 1903–04 did they exceed 600,000 cwts. Figures relating to the export trade in yarns and cotton manufactures were given in the last chapter,* and it is unnecessary to add to what was there said. China throughout the decade took the great bulk of the yarn exported, while the Straits Settlements and Ceylon were the largest purchasers of cotton manufactures.

Exports of Raw Cotton.

	Cwts.
1901–02	5,700,014
1902–03	6,044,806
1903–04	7,931,075
1904–05	5,657,743
1905–06	7,396,535
1906–07	7,400,839
1907–08	8,562,024
1908–09	6,798,411
1909–10	8,968,043
1910–11	3,686,400
1911–12	7,328,523

Oilseeds.—Of the seeds exported, all but an insignificant fraction are oilseeds. The quantity and value of the exports of the most important oilseeds in 1901–02 and 1911–12 are shown in the marginal table. The value of the exports in 1911–12 was the highest on record, though the total weight was rather less than in 1910–11. The magnitude of the export trade, and the relative importance of the different seeds, vary considerably from year to year. Linseed, which generally takes the first place, advanced remarkably in the last two years of the decade, but an even larger quantity was exported in 1904–05, though the value was less than half. Other noticeable features are the recovery of groundnut, which had fallen very low at the end of the last century—due largely to the introduction of disease-resisting varieties—and the development of the trade in cotton-seed, which up to 1901 was quite small. Practically all the oilseeds exported are sent to Europe for utilisation in soap and candle factories. In 1911–12, taking the exports of seeds as a whole, the United Kingdom and France each took nearly a quarter of the total, with Belgium not far behind, Germany coming next, and the United States appearing for the first time as a large purchaser with a total of £1,255,000 worth.

	1901–02.		1911–12.	
	Quantity.	Value.	Quantity.	Value.
	Cwts.	£	Cwts.	£
Linseed	7,327,869	4,509,196	10,440,462	8,643,277
Rape	6,924,895	2,970,403	4,709,539	2,341,384
Groundnuts	1,085,415	524,948	3,822,583	2,120,484
Sesamum	2,447,149	1,429,291	1,896,391	1,350,861
Castor	1,323,896	572,612	2,403,872	1,178,462
Cotton	2,036,056	309,210	4,073,110	1,012,752
Poppy	934,080	521,156	698,867	497,455

* Page 278.

(Sea-borne Trade.)

Jute.—Regarded quantitatively, the export trade in raw jute has not, as the figures in the margin show, developed as greatly as the figures of value given above suggest. The price fluctuates greatly; the maximum for the period under review was reached in 1906–07. The largest purchaser is the United Kingdom, which took in 1911–12 about 44 per cent. of the total, Germany taking rather more than half as much. Jute, as the cheapest fibre in the market, is in constant demand in Europe, being used for making not only packing cloth and bags, as in earlier days, but also carpets and rugs, which, though not durable, are showy and very cheap. Reference has been made in the preceding chapter to the trade in jute manufactures.*

Exports of Raw Jute.

	Cwts.
1901–02	14,755,119
1902–03	13,036,486
1903–04	13,721,447
1904–05	12,875,312
1905–06	14,480,407
1906–07	15,970,478
1907–08	14,191,597
1908–09	17,879,903
1909–10	14,608,362
1910–11	12,732,460
1911–12	16,203,098

Hides and Skins.—Hides and skins were in specially great demand in 1905–06 and the following year, and the quantity of raw hides and skins exported was in both years greater than in the bad year 1900–01, when great mortality among cattle, due to famine, was an important factor. In 1911–12 exports again reached about the same level. In no year of the decade, however, were the exports of dressed and tanned hides and skins as high as in 1900–01. Taking the trade as a whole, hides and skins are, roughly speaking, about equally important, but a larger proportion of hides are exported in the raw state. Raw hides go in the largest quantities to Germany, and raw skins mainly to the United States. The great bulk of the dressed or tanned products are taken by the United Kingdom.

The trade in *Opium* and that in *Tea* are dealt with elsewhere (pages 191 and 276 respectively).

Other Articles.—The exports of raw wool, which expanded greatly during the decade, go almost entirely to the United Kingdom. A good deal of the wool recorded under this head actually comes from beyond the land frontiers of India. The trade in lac, of which India is the main source of supply, is a very variable and speculative one, owing to the great fluctuations in price. There was a great fall in price in 1908. The exports are mainly in the "manufactured" forms of shellac and button lac, and go principally to the United States, the United Kingdom, and Germany. The two main classes of oils exported are mineral oils and vegetable oils (not essential), the respective values in 1911–12 being £442,284 and £542,006. The exports under both heads fluctuate considerably; the value of mineral oils exported increased greatly in the last three years of the decade, owing to large exports of paraffin wax and the development of the export trade in petrol and benzine. The mineral oil trade originates almost entirely in Burma, the United Kingdom being the largest single customer, as it is also for vegetable oils. The figures under the head "metals" are interesting by reason of the great development of the exports of manganese ore, the quantity of which in 1911–12 was 536,000 tons, and the value £576,692, as against 130,000 tons, valued at £95,857, in 1901–02. The expansion under this head took place mainly in the first half of the decade, and was helped by activity in the steel industry synchronising with restriction of the Russian output owing to political disturbances. Another noticeable feature was the development in the last three years of the decade of a considerable export trade in pig-lead from Burma, the value of which in 1911–12 was £190,440 as compared with £613 in 1907–08. The exports of coffee were dealt with in the preceding chapter.† Indigo is no longer entitled to a leading position among the articles exported. There was a slight recovery in 1911–12, but the exports amounted to less than a thousand tons, as compared with 4,500 tons ten years earlier and over 9,000 tons in 1895–96. About a third of the total quantity went to the United Kingdom.

Re-exports of Imported Merchandise.—The re-export trade is comparatively unimportant. The development of direct communications between various parts of the world tends to diminish the trade of *entrepots*, and the Indian re-export trade, though it has not in recent years shown the decline that might be expected, shows no great tendency in the other direction. The re-export trade is mostly in manufactured goods from western countries, the most important class being cotton goods, which go to Persia, Muscat, Bahrein, East Africa, &c. Re-exports to western countries are ordinarily comparatively small, raw wool imported over the land frontiers being

* Page 280. † Page 277.

the principal commodity. In 1911–12 raw wool to the value of £207,000 was re-exported to the United Kingdom. The total figures for that year were swollen by exceptional re-shipments of sugar, mainly to the United Kingdom, in response to high prices.

Trade by Countries.—The countries from which the principal imports mainly come, and those to which the exports under the different heads go, have been indicated in preceding sections. The table below shows the chief countries trading with India, and the proportion of the total trade assignable to each in different years. The countries mentioned between them account for over 90 per cent. of the total trade.

	Imports of Merchandise into India.					Exports of Indian Merchandise.					Percentage of Total Foreign Trade in Private Merchandise (including Re-exports).	
	Value, 1911–12.	Percentage of Total Imports.				Value, 1911–12.	Percentage of Total Exports.					
		1901–02.	1907–08.	1909–10.	1911–12.		1901–02.	1907–08.	1909–10.	1911–12.	1901–02.	1911–12.
	£ 000 omitted.					£ 000 omitted.						
United Kingdom	57,635	64·5	66·7	62·6	62·4	38,428	25·1	25·9	26·2	26·0	40·6	40·0
Straits Settlements	1,985	2·8	2·2	2·4	2·1	5,735	5·2	3·9	3·2	3·9	4·3	3·2
Hong Kong	612	1·3	·7	·7	·7	5,422	8·1	4·8	5·2	3·7	5·4	2·5
Ceylon	457	1·1	·7	·6	·5	5,530	3·7	3·5	3·4	3·7	2·7	2·5
Australia	731	·8	·6	·8	·8	1,852	1·3	1·5	1·5	1·3	1·1	1·1
Mauritius and dependencies	1,277	2·4	1·9	2·1	1·4	938	1·1	·6	·6	·6	1·6	·9
Total, British Empire	63,639	73·6	73·6	70·5	68·9	61,481	47·1	42·6	42·4	41·6	57·7	52·3
Germany	5,969	3·7	5·9	5·5	6·4	15,058	8·4	12·0	9·8	10·2	6·4	8·6
United States	3,527	1·7	2·7	3·1	3·8	10,393	6·9	7·9	7·8	7·0	4·6	5·7
Japan	2,318	1·0	1·7	2·2	2·5	11,153	5·7	5·1	6·8	7·5	3·7	5·5
Belgium	1,542	3·7	1·6	1·7	1·7	8,883	3·9	4·9	5·5	6·0	3·8	4·3
France	1,427	1·7	1·5	1·5	1·5	9,162	7·3	6·3	6·2	6·2	5·0	4·3
Java	6,314	·5	4·5	6·8	6·8	2,845	·3	·7	·8	1·9	·4	3·7
China (excluding Hong Kong and Macao).	1,034	1·0	·9	1·1	1·1	6,730	6·4	3·8	4·7	4·5	4·1	3·2
Austria-Hungary	1,771	4·8	1·9	2·2	1·9	5,047	1·9	3·6	3·5	3·4	3·1	2·8
Italy	837	1·2	·8	·8	·9	4,187	2·4	3·2	3·3	2·8	1·9	2·1
Russia	77	3·9	·3	·1	·1	1,158	·2	·7	·8	·8	1·7	·5

Owing to a change in the method of compiling the statistics, the figures for 1901–02 are not altogether comparable with those for the later years. Before 1907–08 imports were shown as received from the countries whence they were shipped direct to India, and exports as going to the country containing the port of discharge as declared on shipment. From 1907–08 onwards imports are credited to the countries whence they are consigned to India, and exports to the countries to which they are consigned, *i.e.*, to the countries of final destination so far as known. The changes affect both countries possessing no seaboard, which formerly did not appear in the returns, and also other countries whose trade with India passes to a large extent through ports other than their own. The most noticeable effects are a considerable diminution in the recorded imports from Belgium and a corresponding increase in imports from Germany. Apart from these effects, the most striking changes shown by the table above are the diminution in the imports from Russia and Austria-Hungary, and the increase in those from Java, the United States, and Japan. In the first four cases, the results are due mainly to the changes in the sugar and oil trades referred to above. In the case of Japan, the development of the import trade has been most marked under the heads of silk manufactures and cotton hosiery.

Government Stores.—Little need be said as to the stores imported and exported on Government account. About a half of the imports, which come almost exclusively from the United Kingdom, consists of railway plant and rolling-stock; metals, hardware and cutlery, and arms and ammunition are other important heads. The exports of Government stores are insignificant, Indian merchandise contributing less than half the total amount. The United Kingdom and Aden between them take about a half of the exports.

Movements of Treasure.—The movements of treasure are of special interest, in view of the considerations indicated below, and of their connection with currency. The figures are given in detail in the following table:—

(Sea-borne Trade.)

Figures in Thousands of Pounds Sterling, omitting 000.

	1902-03.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.
Gold:										
Imports { On Government account	30	11	—	4	42	12	—	9	—	—
Imports { On private account	8,764	13,421	14,541	9,829	12,314	13,823	5,603	16,678	18,595	27,662
Exports { On Government account	500	4,276	5,605	6,000	—	—	240	2	—	5
Exports { On private account	2,452	2,535	2,466	3,527	2,452	2,257	2,459	2,232	2,609	2,484
Net Imports	5,842	6,621	6,471	306	9,904	11,578	2,904	14,453	15,986	25,173
Silver:										
Imports { On Government account	52	4,377	4,320	7,149	11,544	6,297	75	56	46	33
Imports { On private account	8,073	7,875	7,477	4,119	5,820	8,057	9,485	8,272	7,850	7,952
Exports { On Government account	65	321	30	13	3	2	2	2	6	3
Exports { On private account	3,422	2,830	2,927	773	1,357	1,374	1,512	2,030	2,136	4,424
Net Imports	4,638	9,101	8,840	10,482	16,004	12,978	8,046	6,296	5,754	3,558

From the earliest times gold and silver have flowed into India in such a perennial stream that the country has been styled a sink for the precious metals. Owing to the habits of the people, to the restrictions imposed by caste regulations, and to the low standard of living, the consumption of imported merchandise is limited, and a considerable proportion of the payment for exports is taken in the form of gold and silver, the metals being used for hoarding, either as coin hidden away in secret places, or as ornaments on the persons of women and children. To obtain a figure for the total amount of gold absorbed, the local production—something over £2,000,000 a year—must be added to the net import. Silver is not produced locally in any quantity. About half of the total amount of gold imported, speaking very roughly, is in the shape of coin, practically all British; the exports consist of bullion to the extent of between £2,000,000 and £2,500,000 a year (the gold produced in India being sent to England for assay), the balance being made up of coin. Silver is imported mainly as bullion, and exported mainly as coin, including both rupees, which circulate extensively in Ceylon, Mauritius, Arabia, East Africa, and the Persian Gulf, and British dollars, circulating in Hong Kong. As has already been noticed, the total net import of treasure was in every year of the decade above the highest level reached in the preceding decade. The most striking feature of the returns is the remarkable increase in the imports of gold in the closing years of the decade; the figure for 1909–10 was, at the time, the highest on record, so that the total import in 1911–12 was far beyond anything previously recorded. The imports of silver similarly attained an unprecedented level in 1906–07.

Ports, Shipping, and Freights.

The table in the margin shows the proportion of the total foreign sea-borne trade in private merchandise passing through each of the seven leading ports at the beginning and end of the decade. These ports between them account for practically the whole of the imports and more than nine-tenths of the exports. Both Karachi and Rangoon made noticeable progress during the decade, the value of the exports in both cases, and of the imports also in the case of Karachi, being more than doubled. The increase in the actual figures was, of course, very large at all of the larger ports, though the proportionate figures for Calcutta, Bombay, and Madras showed some falling off.

	Imports.		Exports.	
	1901-02.	1911-12.	1901-02.	1911-12.
	Per cent.	Per cent.	Per cent.	Per cent.
Calcutta	40·1	37·5	43·2	37·7
Bombay	34·7	35·6	30·5	27·7
Karachi	7·9	9·5	7·1	10·8
Rangoon	7·4	8·3	6·5	8·9
Madras	7·4	6·7	3·6	3·1
Tuticorin	·7	·8	1·7	2·3
Chittagong	·1	·5	1·2	2·3

The numbers and tonnage of steamers and sailing vessels (including their repeated voyages), with cargoes and in ballast, that entered from and cleared to all countries in 1911–12 and some earlier years are given below, with the numbers of vessels under the principal flags.

	1901-02.	1904–05.	1907–08.	1909–10.	1910–11.	1911–12.
Total number of vessels	8,613	9,798	9,312	8,642	8,435	8,868
„ tonnage (*figures in thousands*)	9,625	13,881	14,239	14,597	14,985	16,616
Classification of vessels:—						
British, other than British Indian	3,988	5,633	4,785	4,722	4,751	5,117
British Indian, other than native craft	1,289	1,031	874	773	637	647
Foreign, other than native craft:						
German	270	339	375	455	419	472
Austro-Hungarian	164	156	157	220	208	213
Norwegian	78	141	188	95	104	134
Japanese	29	—	123	63	77	121
Italian	60	74	79	81	84	83
Dutch	8	25	50	75	55	82
French	149	94	61	56	56	58
Native craft	2,003	1,960	2,588	1,461	2,124	1,868

The evidence of progress is to be found rather in the tonnage than in the number of vessels, the total figures under the latter head including a large and variable number of small craft. The vessels classed as native craft, which are all sailing ships, though numerous, contributed in 1911–12 less than one per cent. of the tonnage. The proportion of steam tonnage increased steadily from about 96 per cent. in 1901–02 to 98·7 per cent. in 1911–12. In 1901–02 the total number of ships included 479 small Arab sailing ships, which thus took the first place, so far as numbers went, among foreign ships. These have practically disappeared from the returns since 1906. The vessels that enter and leave the ports of India for the most part fly the British flag; the tonnage under that flag, including the Indian register, was about 81 per cent. in 1901–02 and 79 per cent. in 1911–12.

Among factors of great importance affecting Indian trade a prominent place must be given to freights. It is a fact of some consequence that the exports not only exceed the imports in value, but also consist chiefly of raw material, and are thus more bulky than the manufactured articles received. On the whole, the general tendency of freight rates has in recent years been downwards, but since 1908 they have risen somewhat. The figures given in the "Review of the Trade of India" for 1911–12 show that rates in that year were higher than at any time since the South African War. The rates quoted at the principal ports for freight to London for different commodities varied between 15*s.* and £1 12*s.* 6*d.* per ton.

Land Frontier Trade.

In view of its comparatively small dimensions, and of the imperfect nature of the returns, the land frontier trade does not call for the same detailed treatment as the sea-borne trade. The figures given in the table on page 286 show that the total value of the registered trade increased steadily, and was very nearly doubled, during the decade. Part of the increase may be due to improved registration. The exports and imports of merchandise in 1901–02 and 1911–12 to and from the most important of the countries included in the returns are shown in the margin. The figures for the later are much larger than those for the earlier year in all cases, with the exception of Western China. The trade under this head, which is the trade of Bhamo with Tengyueh, in Yunnan, fell off considerably in 1911–12 as a result of the disturbed

	Imports into India.		Exports from India.	
	1901–02.	1911–12.	1901–02.	1911–12.
	£	£	£	£
Afghanistan	416,286	636,080	447,278	843,495
Persia	19,645	20,515	50,458	108,837
Dir, Swat, and Bajaur	248,851	474,653	435,503	487,724
Tibet	122,544	174,147	75,618	97,228
Sikkim	33,759	79,772	21,314	72,644
Nepal	1,646,758	2,911,729	1,081,220	1,475,461
Bhutan	38,334	46,061	18,937	281,807
Western China	193,157	106,272	263,572	239,674
Shan States	409,618	1,175,321	520,603	1,184,893
Karenni	134,997	142,853	8,894	29,057
Siam	189,474	212,165	88,145	156,640

(Land Frontier Trade.)

state of the Chinese provinces. The most noticeable increase, in the exports to Bhutan, was a sudden development of 1911–12, the exports in the previous year being valued at £6,245 only. No special explanation of this remarkable advance appears to be forthcoming. The trade with Persia continues very small, in spite of the efforts made to develope the route from Quetta by way of Nushki and Seistan. The Quetta–Nushki railway was opened in 1905, and rebates of freight have been granted by some Indian railways on goods for Persia, but trade has been subject to various discouragements, including latterly the disturbed state of the country and the prevalence of robbery on the trade routes.

The principal imports across the land frontiers are rice, oilseeds, provisions, cattle, sheep, and goats, all coming largely from Nepal; horses, ponies, and mules, chiefly from the Shan States; teak, from Siam, Karenni, and the Shan States; other timbers, from the north-west frontiers; raw wool, mainly from Afghanistan and Tibet; and fruits and vegetables, especially from Afghanistan. The principal exports are cotton manufactures and yarns, mostly of foreign origin. The other exports, among which fish, spices, metals, sugar, and salt are some of the most important, are on a much smaller scale.

Internal and Coasting Trade.

It is impossible to deal comprehensively with the internal trade of India, but the figures in the margin (taken from the "Accounts of the Trade carried by Rail and River in India" for 1911–12) are of interest as giving some idea of the extent to which the different parts of the country are respectively concerned in movements of commodities on a large scale. The statistics relate mainly to rail-borne trade, the country being divided for this purpose into the 17 blocks shown in the table. Each of the chief ports is treated as a separate "block." The trade registered is the trade coming into or going out of each block by rail, excluding through traffic. The river-borne trade between Bengal and Eastern Bengal and Assam, Calcutta and the United Provinces, and the Punjab and Sind and British Baluchistan is also registered, and the results combined with the statistics of rail-borne trade. There is no systematic record of the trade carried by road, and rail-borne trade is not registered in Burma.

Merchandise—Figures in Thousands of Tons.

—	Imports.	Exports.	—	Imports.	Exports.
Bengal	1,806	11,921	Rajputana and Central India	871	982
Eastern Bengal and Assam	1,140	1,884	Nizam's Territory	227	757
United Provinces	2,133	2,444	Mysore	302	193
Punjab	2,047	2,161	Kashmir	17	79
Sind and British Baluchistan	356	372	Calcutta	10,573	2,124
Central Provinces and Berar	762	1,469	Chittagong	231	108
Bombay	2,114	1,251	Bombay port	2,681	1,275
Madras	1,253	1,494	Karachi	2,113	552
			Madras ports	1,368	931

There is a considerable coasting trade from port to port in British India and the native states, the total estimated value of which, taking private merchandise only, rose, with some fluctuations, from £27,700,000 in 1901–02 to £39,600,000 in 1911–12. The greater part of this trade is between Burma and the ports on the western shores of the Bay of Bengal, especially Calcutta, and along the coast between Bombay and Karachi. The figures for each province of British India for 1911–12 are given in the margin. The trade is mostly in Indian merchandise, the principal exports being jute manufactures, coal, and food-grains from Calcutta, cotton manufactures and food-grains from Bombay, raw cotton and food-grains from Karachi, and rice and mineral oil from Rangoon. Native craft and British

—	Value of Private Merchandise imported and exported coastwise.	
	Imported.	Exported.
	£	£
Bengal	5,288,000	6,458,000
Eastern Bengal and Assam	526,000	623,000
Bombay	13,478,000	12,852,000
Sind	4,407,000	2,090,000
Madras	5,405,000	4,221,000
Burma	6,765,000	6,888,000

Indian vessels naturally take a much more important part in the coasting than in the foreign trade, the former being by far the most numerous among vessels entered and cleared.

Joint Stock Companies.

The number of joint stock companies registered under the Indian Companies Act of 1882 at work at the beginning and end of the period under review is shown in the following table, with their distribution by provinces at the end of 1911–12 :—

	Number of Working Companies registered in each Province.								Total, 1912.*		Total, 1902.*	
	Central Provinces and Berar.	Bengal.	Bihar and Orissa.	United Provinces.	Punjab.	Bombay.	Madras.	Burma.	No. of Companies.	Paid-up Capital.	No. of Companies.	Paid-up Capital.
Banking, Loan, and Insurance :										£		£
Banking and loan	3	67	8	37	34	38	239	6	491	5,246,000	452	3,093,000
Insurance	1	79	—	6	42	21	16	—	182	232,000	29	112,000
Trading :												
Navigation	—	10	—	—	—	8	1	4	23	972,000	6	162,000
Railways and tramways	—	16	—	1	1	13	1	1	35	4,006,000	20	2,166,000
Total, all classes	9	213	29	79	68	221	93	48	805	10,622,000	303	4,861,000
Mills and Presses :												
Cotton mills	3	15	—	4	7	150	20	2	203	10,015,000	147	8,020,000
Jute mills	—	35	—	—	—	—	—	—	35	4,462,000	20	2,217,000
Mills for wool, silk, hemp, &c.	—	1	—	4	1	8	—	—	15	646,000	22	480,000
Cotton and jute screws and presses	7	14	—	11	40	77	19	2	147	1,678,000	113	1,072,000
Total, all classes	11	81	—	30	33	261	53	16	496	18,418,000	356	12,465,000
Tea and other Planting Companies :												
Tea	—	145	—	4	—	—	3	—	156	2,414,000	138	2,314,000
Total, all classes	—	151	—	4	1	2	12	9	186	2,667,000	153	2,403,000
Mining and Quarrying :												
Coal	1	113	1	—	1	5	2	—	123	3,902,000	43	1,070,000
Gold	—	—	—	—	—	—	4	6	10	160,000	10	144,000
Total, all classes	3	133	3	—	3	12	11	33	203	6,998,000	67	1,347,000
Land and Building	—	6	—	—	3	9	1	9	30	1,259,000	5	437,000
Sugar Manufacture	—	5	1	5	3	3	4	—	22	528,000	10	242,000
Grand total, including all other companies :												
1912 Number of companies	28	745	42	170	194	575	437	122	2,463	—	—	—
1912 Paid-up capital (£)	170,000	17,775,000	41,000	2,222,000	1,296,000	17,857,000	3,228,000	3,174,000	—	46,251,000	—	—
1902 Number of companies	17	413	—	87	51	332	379	22	—	—	1,405	—
1902 Paid-up capital (£)	224,000	10,885,000	—	1,195,000	529,000	10,446,000	1,671,000	298,000	—	—	—	25,507,000

* Including companies in Assam, North-West Frontier Province, Ajmer-Merwara, and other minor provinces; also those in Mysore registered under the Mysore Companies Regulation of 1895.

All the companies registered in India have a rupee capital, except one banking company registered many years ago with a capital in Hong Kong dollars. Apart from the share capital shown above, several companies have issued debentures, the value of which in December 1912 was £6,005,000.

The number of companies at work and the total of paid-up capital increased steadily throughout the decade. Development was particularly noticeable in navigation companies and coal and other mining companies, and in Burma and the Punjab among the provinces.

There were 159 more companies at work on the 31st March 1912 than on the corresponding date in the preceding year. The total number of new companies registered during the year was 334, of which 102 were insurance companies, including 56 in Bengal and 31 in the Punjab. It was reported in the Punjab that the new companies registered under this head were provident societies of the scandalous type, for the regulation of which Act V. of 1912 (*see* below) was passed. In Bengal the increase was attributed to the introduction of the Insurance Bill, and the desire to work for some time without paying a deposit; the fear was expressed that a number of the companies would not be able to carry on the business of life assurance successfully.

The number of companies now at work represents about 40 per cent. of the total number registered since the law came into force. Among the companies that have

(Joint Stock Companies.)

ceased to work are a number of speculative gold-mining companies and "provident" associations in Bengal.

The above figures do not include the numerous and important companies that, while carrying on business in India, are registered in other countries and have their capital in money other than Indian. The number of companies of this description carrying on work exclusively, or nearly so, in India, mostly with sterling capital, was at the end of 1911, so far as known, 373, with a paid-up capital of £77,979,000, besides £45,353,000 debentures. Railway companies accounted for nearly half the paid-up capital, and for the greater part of the debentures. The most important of the other companies in this class were navigation companies (paid-up capital £3,390,000), jute mills (£2,454,000), rice mills (£2,106,000), tea-planting companies (£14,965,000), gold-mining companies (£2,836,000), and other mining companies (£7,372,000). The gold-fields in Southern India are mostly worked by companies formed in the United Kingdom, and railways, tea planting, and rice mills are, in the same way, mainly financed from outside.

A Bill to revise and consolidate the Indian law on the subject of joint stock companies on the lines of recent English legislation was introduced in the Governor-General's Legislative Council in March 1912, and has since passed into law as the Indian Companies Act (No. VII.) of 1913. The Act makes a number of important changes in the law.

Special provision was made for the better control of life assurance companies, the operations of which were previously regulated by the Indian Companies Act, by the Indian Life Assurance Companies Act (No. VI.) of 1912, which followed as far as possible the lines of the English Assurance Companies Act of 1909.

At the same time similar provision was made in respect of provident insurance societies, *i.e.*, societies, not being life assurance companies proper, which undertake insurances on births, marriages, and deaths, by the Provident Insurance Societies Act (No. V.) of 1912. The attention of the Government of India had from time to time been drawn to the existence of large numbers of such societies in different parts of India, and to their unsound business methods, and it had become clear that the provisions of the Companies Act were insufficient to control the undesirable tendencies shown. In the Punjab, where, as noted above, a large number of provident societies were registered under the Companies Act during 1911–12, the effect of the new Act was reported to be immediate and beneficent. The registration of new provident societies ceased; some of the existing companies received attention from the police; many others hastened into voluntary liquidation.

CHAPTER XVIII.

POST OFFICE AND TELEGRAPHS.

The Indian Postal and Telegraph Departments have been in the past, and were up to the end of the period under review, separate and independent, though arrangements have been in force since 1883 under which a large number of post offices serve also as telegraph offices. The question of amalgamating the two departments, first raised many years ago, was considered again in 1905 when the Department of Commerce and Industry was created, but it was then decided that no steps could be taken in this direction until the organisation of the Telegraph Department had been revised. The reorganisation of 1910, by rendering the postal and telegraph circles coterminous,* brought amalgamation a step further within the sphere of practical politics, and, in view of the measures of decentralisation brought into effect in both departments, it was considered that they could now with safety be placed in charge of a single officer, and that in this way a first experimental step towards amalgamation might best be taken. It was therefore decided that, with effect from April 1912, the Director-General of the Post Office should hold also the office of Director-General of Telegraphs, as a tentative measure, with instructions to report, after he had gained some experience of the Telegraph Department, whether a complete fusion of the postal and telegraph services is feasible and advisable. In announcing this decision, the Government of India added that it was not intended to take any decisive step without obtaining the considered views of commercial bodies and the public at large. It may be mentioned that in July 1912 the experiment was carried further by provisionally amalgamating the postal and telegraph services in the Bombay and Central circles.

Post Office.

Administration.—The chief control of the Post Office in India is vested in a Director-General, who is subordinate to the Government of India in the Department of Commerce and Industry. For postal purposes the country is divided into a number of circles, at present eight, each in charge of a Postmaster-General. The number of circles was reduced during the period under review; their boundaries correspond in a general way with those of the larger provinces. The distinction between the Imperial and district posts, which had been a peculiar feature of the Indian postal system, ceased to exist in 1906. The district post, the original object of which was, generally, to provide communication between the headquarters of districts and revenue and police stations, had acted, when not restricted to official requirements, as a pioneer for the Imperial post in parts of the interior to which the operations of the latter had not been fully extended, funds being derived from local cesses or special grants. Since 1906, the entire postal service has been maintained at the cost of Imperial revenues, and the administration of the district postal arrangements, originally vested in district officers, is now everywhere entrusted to the local postal authorities.

The everyday work of the Post Office is performed almost entirely by Indian agency, only the highest administrative and controlling appointments being ordinarily held by Europeans.

Expansion of System.—The figures given in the marginal table serve to give a general view of the expansion of the Post Office system in India as a whole during the decade. The new post offices opened year by year are chiefly small village offices, which are in most cases placed in charge of schoolmasters, petty shopkeepers, &c. The provision of letter-boxes has also, as the figures show, received much attention in recent years. Every office opened in a rural tract reduces the necessity for village postmen, and the large increase in the number of such offices accounts for the fact that the increase in the number of village postmen is comparatively small. ("Village postmen" being postmen who stay out on their beats for more than a day at a time.) The

	On 31st March 1902.	On 31st March 1912.
Total number of—		
Post offices	13,845	18,801
Letter-boxes	28,902	48,122
Village postmen	7,944	8,219
	1901–02.	1911–12.
Distance over which mails were conveyed by—	Miles.	Miles.
Railway	23,490	30,896
Mail carts, horses, camels, &c.	8,130	10,328
Runners and boats	87,668	92,198
Steamer services, sea and river.	17,666	19,973
Total	136,954	153,395

* *See* below, page 303.

(Post Office.)

total strength of the Post Office establishment increased during the decade from 72,093 to 92,755. The latter figure includes 81 women, mostly Europeans or Eurasians; this number, though small, represents an advance on the number employed in 1902.

All the postal circles shared in the expansion: it is impossible, in view of the changes made during the decade in their limits, to compare in detail their respective increases. The marginal table shows the number of post offices and letter-boxes (including the letter-boxes at post offices), in relation to area and population in each circle in 1911–12, with the total figures for 1901–02. The operations of the Imperial Post Office extend to all the native states that never had postal systems of their own, and to a large number of states, including Kashmir, Baroda, and Mysore, that have given up their separate systems. A small number of states still maintain independent postal arrangements, mostly applicable to internal correspondence only. To avoid the inconveniences resulting from this and other limitations, a certain number of Imperial post offices have been established in most of the states in question. During the period under review the Alwar, Bikaner, and Holkar state posts were amalgamated with the Imperial Post Office system.

Postal Circle.	One Post Office served			One Letter-Box served		
	Square Miles.	Population.	Literate Population.	Square Miles.	Population.	Literate Population.
Bengal - -	58	21,629	1,299	14	5,173	309
Bombay - -	69	9,830	709	16	2,339	169
Madras - -	51	19,652	1,269	15	5,734	370
United Provinces	73	21,531	744	18	5,266	182
Punjab and North-West Frontier.	92	9,936	349	32	3,432	121
Eastern Bengal and Assam.	52	16,941	990	16	5,274	308
Burma - -	573	29,399	6,467	98	5,919	1,104
Central - -	163	21,065	596	76	9,762	276
Total, 1911–12	86	16,993	987	24	4,774	277
Total, 1901–02	115	19,719	1,094	37	6,386	354

A notable event was the despatch of the first aerial post in the world, in connection with the Allahabad Industrial Exhibition, on the 21st February 1911, about 6,500 letters being carried by aeroplane from the Exhibition grounds to Naini, a distance of about five miles, across the River Jumna.

Expansion of Business.—The table below compares the numbers of letters, post cards, &c. given out for delivery, and the number of parcels posted, in 1911–12 with the corresponding numbers for the last year of the preceding decade. The figures for parcels and money orders (and, in 1911–12, those for registered letters) are the actual numbers posted and issued respectively; the other figures are estimates computed from the actual figures of 14 days in each year. With the exception of Service letters, which have shown a general downward tendency, the upward movement has been general and continuous, except for two or three breaks, under every head. A noticeable feature is the increase of business on the value-payable, or cash on delivery system, under

——	1901–02.	1911–12.
Letters: Paid - - - - - -	211,998,644	373,223,612
Unpaid - - - - -	28,462,364	35,799,583
Registered* - - - -	10,395,983	14,415,849
Insured - - - - -	145,555	1,287,662
Value-payable* - - -	757,533	1,471,827
Service privileged - - -	7,564,418	†
Total letters* - - -	259,324,497	426,198,533
Post cards: Single - - - - -	227,062,615	424,691,054
Reply - - - - -	9,304,919	
Total letters and postcards*	495,692,031	850,889,587
Registered newspapers - - - -	31,550,052	52,612,161
Book and pattern packets* - - -	27,817,459	51,292,914
Book packets, value-payable* - - -	1,895,001	6,512,465
Parcels, value-payable - - - -	1,003,737	
Parcels, others, registered and unregistered	2,037,567	4,085,603
Total - - - -	559,945,847	965,392,730
Money orders issued - - - -	14,107,218	27,243,409

* Registered packets are included with letters in 1911–12. In 1910–11 there were 1,243,790 ordinary registered packets, and 630,042 registered value-payable packets.
† Included in "Letters, Paid" in 1911–12. The number in 1910–11 was 3,802,570.

(Post Office.)

which the Post Office undertakes to collect from the addressee the price specified for payment on certain classes of articles sent for sale, and to transmit the money to the sender. In 1911–12 the number of value-payable articles posted in Calcutta was 2,251,074, and the Department realised for the tradesmen of the city over £1,700,000; in Bombay the number of articles posted was 1,180,138, and the amount paid to the senders £926,000. Insured letters more than doubled in number in 1911–12, owing to the fact that from the 1st October 1911 insurance was made compulsory in the case of inland postal articles containing currency notes. A satisfactory feature is the comparatively small increase in the number of unpaid letters. The estimated numbers of letters and post cards passing between India and the United Kingdom were trebled in the 10 years, the total numbers despatched to, and received from, the United Kingdom in 1911–12 being respectively 12⅓ and 14½ millions. The money orders issued in 1911–12 represented a total value of nearly £32,500,000.

Detailed comparison by circles is, as before, impracticable. The table shows the number of postal articles (excluding money orders) in relation to population for each circle in 1911–12, with the total figures for 1901–02. In spite of the large proportionate increase during the decade, the number of postal articles for which each inhabitant of the country, on the average, is annually responsible is still only three—a fact that is eloquent of the scope that the Indian Post Office has for development. The high place taken by the Punjab is no doubt due largely to the correspondence of the Government of India during its annual sojourn at Simla.

	Number of Postal Articles per Head of	
	Population.	Literate Population.
Bengal	2·91	48·44
Bombay	6·87	95·29
Madras	2·43	37·62
United Provinces	2·21	64·02
Punjab and North-West Frontier	4·31	122·66
Eastern Bengal and Assam	2·34	40·05
Burma	3·29	14·96
Central	1·69	59·84
Total, 1911–12	3·01	51·89
Total, 1901–02	2·05	36·91

Rates of Postage.—Very great reductions were made in the rates of postage during the decade. The lowest rate of postage on an inland letter is ½ anna (one halfpenny). The weight carried for ½ anna, which from 1869 to 1905 was ½ tola (3/16 oz.), was raised in the latter year to ¾ tola, and in 1907 to 1 tola. In 1907, also, the weight carried for 1 anna was raised from 1½ to 10 tolas. The newspaper rates were similarly reduced in 1904 and 1908, and the weights carried after the latter year—8 tolas for ¼ anna, and 40 tolas for ½ anna—were double those allowed up to 1904. The rates for inland parcels were also reduced by about half in 1907. The inland post card has ever since its introduction in 1879 been sold at one pice (a farthing).

The weight carried between India and England for one anna was increased from half an ounce to an ounce in 1907, and the rate of one anna an ounce now applies to almost all British possessions and to Egypt.

Generally speaking, therefore, the main rates of postage were reduced by a half, or more, during the decade, though the minimum charges remained as before. Reductions were made also in the rates for foreign and colonial parcels.

Financial Results.—The total Post Office receipts and expenditure for each year, as shown in the Finance and Revenue Accounts of the Government of India, are given in the table in the margin. Receipts increased by over £700,000 during the decade, in spite of the sweeping reductions made in postage rates. The increase in expenditure was rather less. Towards the middle of the decade it became clear that the rates of pay of postal servants generally were not in keeping with the increased cost of living, and expensive schemes of revision had to be undertaken. Between 1906 and 1912 the average pay of sub-postmasters was increased by 27 per cent., and the average pay of clerks in head offices and sub-offices by 21⅓ and 25 per cent. respectively. While these increases were being carried into effect, the department had to accept

—	Receipts.	Expenditure.	Net Receipts or *Expenditure.*
	£	£	£
1902–03	1,426,942	1,311,266	115,676
1903–04	1,504,705	1,366,367	138,338
1904–05	1,574,241	1,482,590	91,651
1905–06	1,650,724	1,540,760	109,964
1906–07	1,751,146	1,602,933	148,213
1907–08	1,823,999	1,772,720	51,279
1908–09	1,825,620	1,896,753	*71,133*
1909–10	1,927,229	1,927,582	*353*
1910–11	1,996,922	1,950,892	46,030
1911–12	2,134,279	2,008,470	125,809

(Post Office.)

the unpleasant position of seeing its expenditure growing at a considerable higher rate than its revenue. Since 1908–09, however, there has been a very satisfactory recovery.

Complaints and Offences.—The number of complaints recorded as having been made by the public in 1911–12 was 56,203, of which 20,506 were found to be justified, while no less than 24,787 proved to be groundless. In the remaining cases, either no definite conclusion could be arrived at or the investigation had not been completed by the end of the year. The number of well-founded complaints during recent years has averaged about 1 to 50,000 articles carried. During 1911–12 cases in which servants of the Post Office were held to be guilty of offences punishable by law numbered 503. Money order frauds, thefts from mails and post offices, and cases of misappropriation of office cash, were the most frequent offences. Among offences against the Post Office committed by persons not belonging to the department, the most serious were 28 cases of highway robbery of the mails, four of which were attended by loss of life.

Non-postal Business.—The Post Office performs a number of miscellaneous functions to which it is unnecessary to refer in detail here, such as the sale of quinine (to the amount, in 1911–12, of 9,562 lbs.), the payment of certain military pensions, the receipt of a small amount of salt revenue, and the administration of an insurance fund for Government servants. Arrangements are also in force in different provinces under which money orders are extensively used for the payment of land revenue, rent, and miscellaneous Government dues.

Savings Banks.—The Post Office savings banks call for fuller treatment. Government savings banks were first established in the Presidency towns between 1833 and 1835; in 1870 district savings banks were instituted in connection with selected district treasuries. The Post Office savings banks, opened in all parts of India in 1882 and 1883, absorbed the district savings banks business in 1886, and that of the Presidency savings banks in 1896. The figures for the decade, quoted in the margin, show a steady increase in the number of depositors and in the total amount deposited. Interest was, up to the 1st July 1905, allowed at the rate of $3\frac{1}{2}$ per cent. From that date the rate of interest on deposits held at call was reduced to 3 per cent., but a rate of $3\frac{1}{4}$ per cent. was offered on deposits held subject to six months' notice of withdrawal. This offer failed to find favour with the public, and was withdrawn from the beginning of 1911. Over 90 per cent. of the depositors are natives of India. The classification of depositors according to occupation, at the beginning and end of the period under review, is shown in the table in the margin. The greatest proportional increases were under the heads "agricultural" and "industrial," but under both heads the total number is at present relatively small. Under the head "indefinite" are classed persons who have no occupation, or whose incomes are derived from others. At the end of 1911–12, the Bengal and Bombay circles showed the largest number of accounts (324,527 and 308,022 respectively), and the Central circle and Burma came last with 75,416 and

—	Number of Accounts at End of Year.	Deposits during Year (including Interest).	Withdrawals during Year.	Balance of Deposits (including Interest) at End of Year.
		£	£	£
1901–02	866,693	2,975,855	2,549,944	7,121,415
1902–03	922,353	3,114,051	2,621,097	7,614,369
1903–04	987,635	3,341,734	2,733,655	8,222,448
1904–05	1,058,813	3,701,512	2,985,952	8,938,008
1905–06	1,115,758	3,667,053	3,276,644	9,328,417
1906–07	1,190,220	3,934,206	3,417,970	9,844,653
1907–08	1,262,763	3,965,563	3,689,260	10,120,956
1908–09	1,318,632	3,777,130	3,741,985	10,156,101
1909–10	1,378,916	4,001,380	3,579,362	10,578,119
1910–11	1,430,451	4,336,235	3,635,140	11,279,215
1911–12	1,500,834	5,857,975	4,538,161	12,599,029

—	On 31st March 1902.	On 31st March 1912.
Professional:—		
With fixed income	233,108	384,111
With variable income	58,130	100,743
Domestic	151,204	252,339
Commercial	32,065	62,875
Agricultural	12,387	34,362
Industrial	27,450	58,200
Indefinite	352,349	608,004
Total	866,693	1,500,834

67,759 respectively. Apart from the purely savings bank business, the Post Office undertakes on behalf of depositors the purchase and sale of Government promissory notes.

Indian Telegraph Department.

Administration.—The Indian Telegraph Department is administered by a Director-General, who is under the Commerce and Industry Department of the Government of India; since April 1912 the office, as mentioned above, has been combined with that of Director-General of the Post Office. Up to 1910 India was divided, for telegraph purposes, into 20 divisions, each in charge of a Superintendent directly responsible to the Director-General. In that year a comprehensive scheme of reorganisation, which included the formation of eight circles, coterminous with the postal circles and each under a Director, and extensive measures for the delegation of powers, was carried into effect.

Extension of System.—Apart from the lines, referred to in the next section, worked by the Indo-European Telegraph Department, the operations of the Indian Telegraph Department cover the whole of India. In Kashmir a telegraph system belonging to the State operates in connection with the system worked by the Telegraph Department. The following table shows that there was a very considerable expansion of the latter system during the decade :—

At the End of	Miles of Line (including Cable).	Miles of Wire (including Cable Conductors).	Offices open to the Public.			
			Departmental.	Combined Post and Telegraph.	Railway and Canal.	Total.
1901–02 - - - -	55,827	190,887	241	1,765	3,286	5,292
1902–03 - - - -	56,830	200,533	245	1,806	3,601	5,652
1903–04 - - - -	59,692	212,330	268	1,859	3,964	6,091
1904–05 - - - -	61,684	227,749	272	1,917	4,292	6,481
1905–06 - - - -	64,730	243,840	280	2,029	4,414	6,723
1906–07 - - - -	67,587	259,948	280	2,158	4,061	6,499
1907–08 - - - -	68,940	271,944	279	2,265	4,240	6,784
1908–09 - - - -	70,065	280,595	280	2,378	4,315	6,973
1909–10 - - - -	72,746	287,266	279	2,483	4,463	7,225
1910–11 - - - -	74,828	292,001	279	2,577	4,409	7,265
1911–12 - - - -	76,578	299,343	242	2,713	4,626	7,581

The Telegraph Department undertakes to supply wires and instruments to the railways and canals at fixed rates of rental. Of the total mileage of wire at the end of the decade, 93,436 miles were rented to railways, 8,690 miles to canals, and 14,713 miles were for telephone exchanges and private lines. Among the new sections constructed during the period under review were lines from Nushki to Robat (362 miles) and from Gilgit to Chitral (206 miles), both completed in 1903–4. As the figures show, the policy of combining post and telegraph offices wherever possible has been steadily pursued in recent years, with a view to the more complete co-ordination of the two departments.

Expansion of Traffic.—The total annual number of telegrams was more than doubled during the decade. The table shows the total for each year and the distribution for the years 1901–02 and 1911–12. The greater part of the increase is accounted for, as might be expected, by private inland telegrams, and the detailed figures show that the increase under this head is again almost entirely due to one general class of telegram, viz., the least expensive. At the beginning of the decade 69 per cent.

(Indian Telegraph Department.)

—	Number of Paid Telegrams.	—	1901–02.	1911–12.
1901–02	6,475,545	Foreign :		
1902–03	6,742,094	State - -	16,154	19,541
1903–04	7,307,087	Private - -	886,834	1,498,560
1904–05	9,098,345	Press - -	5,606	17,336
1905–06	10,461,117			
1906–07	11,385,166	Total Foreign -	908,594	1,535,434
1907–08	12,749,923			
1908–09	13,006,778	Inland :		
1909–10	12,084,697	State - -	802,988	1,158,831
1910–11	13,090,228	Private - -	4,727,176	11,814,609
1911–12	14,671,819	Press - -	36,787	162,945
		Total Inland -	5,566,951	13,136,385
		Total :		
		State - -	819,142	1,178,372
		Private - -	5,614,010	13,313,169
		Press - -	42,393	180,278
		Grand total -	6,475,545	14,671,819

of the private telegrams were sent at "deferred" rates; in succeeding years the "deferred" telegrams steadily gained at the expense of the "ordinary" class, until in 1908 they accounted for 85 per cent. of private telegrams. Under the new arrangements introduced in 1909, referred to below, a similar tendency is to be noticed, the percentage of "ordinary" private telegrams having risen from 86·5 in the first part of 1909 to 91·47 in 1911–12. The rapid increase in the number of telegrams beginning in 1904 was largely due to the introduction of the 4-anna telegram. The set-back in 1909–10 was attributed partly to depression in internal trade. There was a large increase in 1911–12, due principally to the Imperial visit and the Coronation Durbar; in the case of private telegrams, heavy speculation in grain in July and August, due to the partial failure of the rains, was also a contributing cause.

The traffic methods of the Indian Telegraph Department were thoroughly overhauled, and many reforms were introduced, in the years 1907 to 1910, in accordance with suggestions made by Mr. Newlands, of the British Post Office, whose services were lent to the Government of India for the purpose.

A new departure of some interest was made in December 1907, when the employment of women in the Telegraph Department as signallers was sanctioned by the Government of India. Subsequently, in February 1908, the sanction was extended to their employment as booking clerks in certain large offices as an experimental measure. At the end of 1911–12 there were 45 women altogether, out of a total of 11,051 persons on the establishment of the department.

Telegraph Rates.—The decade was noteworthy for the reduction of telegraph charges in various directions. As regards inland private telegrams, there were up to 1909 three classes of telegrams—"ordinary," "urgent," and "deferred." From 1882 to 1903 the rate for "ordinary" telegrams was 2 annas (twopence) a word, with a minimum of 1 rupee (1*s.* 4*d.*). The "urgent" rate was double, and the "deferred" rate a half, the ordinary rate. In January 1904 some changes were made, the most important being the introduction of a 4-anna "deferred" telegram of four words, with six words allowed for the address. In July 1905, a further modification was made, a total of 10 words, including the address, being allowed for 4 annas. For additional words the charge was 1 anna a word, as before. In January 1909 the "deferred" rates were abolished, and with them the 4-anna telegram; but at the same time the "ordinary" rate was reduced to 6 annas for 12 words, with half an anna for each additional word (equivalent to the existing inland rates in Great Britain). The "express" rate, which took the place of the "urgent" rate, is 1 rupee for 12 words, with 2 annas for each additional word. The rates for press telegrams were also reduced during the decade, and reductions were made in various foreign rates. The charge for telegrams between India and Great Britain, which had been reduced from 4*s.* to 2*s.* 6*d.* a word in March 1902, was further reduced in August 1905 to 2*s.* a word *viâ* Tehran or Suez, and 1*s.* 10*d.* *viâ* Turkey.

A mixed postal and telegraph service between India and the United Kingdom—postal between London and Bombay, and telegraphic for the remaining portion of the route—was introduced in July 1909, but has been very little used. Up to the end of 1911–12 only 937 messages had been sent from India to the United Kingdom, and 143 in the reverse direction. To meet the convenience of those who send foreign telegrams occasionally on social and minor business affairs, and who are unable to avail themselves of the facilities for compression afforded by the use of codes, a system of deferred telegrams in plain language at half the usual rates was introduced

(Indian Telegraph Department.)

between India on the one hand and the United Kingdom and various British possessions and foreign countries on the other at the beginning of 1912. During the first three months of the year 3,720 telegrams were exchanged under this system.

Financial Results.—In consequence of the reductions in rates, and of the continually growing preference on the part of the public for the cheapest means of telegraphing,

—	Revenue.			Working Expenses.	Net Revenue (excluding Capital Expenditure and Interest on Capital).	Expenditure on Construction (Capital Account).	Percentage of Net Revenue on Total Capital Outlay.
	From Messages.	Miscellaneous.	Total.				
	£	£	£	£	£	£	
1902–03 -	587,165	162,227	749,392	528,982	220,410	328,612	4·15
1903–04 -	576,148	165,718	741,886	538,278	203,588	244,629	3·67
1904–05 -	595,293	177,900	773,193	546,914	226,279	274,826	3·88
1905–06 -	626,287	189,324	815,611	599,052	216,559	380,474	3·49
1906–07 -	645,373	193,217	838,590	644,205	194,385	379,798	2·95
1907–08 -	683,614	206,891	890,505	752,411	138,094	272,745	2·01
1908–09 -	664,729	225,474	890,203	783,022	107,181	239,671	1·51
1909–10 -	587,290	220,658	807,948	807,519	429	167,955	·01
1910–11 -	634,349	223,598	857,947	791,834	66,113	147,554	·89
1911–12 -	707,789	243,829	951,618	821,624	129,994	226,972	1·70

the revenues of the department showed only a comparatively small increase during the decade, in spite of the great increase in the number of messages. Working expenses, on the other hand, rose considerably, as a result of the additions to the staff required to cope with the increased traffic, and of improvements of pay. The figures, as given in the departmental reports, are shown in the table. Making no allowance for interest on capital, there was a net profit in each year; but the percentage returns fell to a very low figure in the latter years, and the net revenue was throughout more than counterbalanced by expenditure on construction, which is met from revenue. Up to the end of 1911–12, the total capital expenditure since 1851 was £7,639,000, and the total net profits, excluding all charges on account of capital, £4,209,000.

Wireless Telegraphy.—The first wireless telegraphic installation under the Government of India was that between Diamond Island, off the coast of Burma, and Port Blair, in the Andamans, which was opened for public traffic on the 1st October 1905. Other installations were brought into use shortly afterwards—between Saugor Island (closed in favour of Calcutta in April 1907) and the steam pilot vessel at the Sandheads in November 1905, between Bassein and Diamond Island in May 1907, and between Mergui and Victoria Point in February 1909. In October 1909 a station was opened at Bombay for communication with outgoing and incoming vessels, and from the 1st November 1910 all stations with the exception of those at Bassein, Mergui, and Port Blair were opened for the exchange of all classes of messages with ships at sea under international rules. The erection of four wireless telegraph stations at Calcutta, Allahabad, Delhi, and Simla (the first three with a range of 600 miles, the last with a range of 300 miles) was commenced in July 1911, and the stations were completed and taken over by the Indian Telegraph Department a few days after the end of the period under review. The erection of four more stations at Bombay, Karachi, Nagpur, and Lahore has been taken in hand by the department. The nine stations opened in 1911–12 disposed of over 65,000 messages of all kinds, and over 2,500 messages were exchanged with ships, as compared with 1,520 in 1910–11 and only 338 in the preceding year.

Telephones.—Telephone exchanges have been established in a few of the largest towns—Calcutta, Madras, Bombay, Karachi, and Rangoon—by private companies, under licences from Government. Elsewhere the telephone system is in the hands of the Indian Telegraph Department. At the end of 1911 there were 14 telephone exchanges, with 6,876 connections, established by companies, and 179 exchanges, with 3,485 connections, established by the department. Similar figures for 1901 are not available, but some idea of the progress made during the decade may be gathered from the fact that the payments made to the Telegraph Department for telephone and similar services increased from £11,390 in 1902 to £39,344 in 1911, while the gross receipts of the telephone companies rose from £31,831 in 1902 to £74,155 in 1910.

(Indo-European Telegraph Department.)

Indo-European Telegraph Department.

The Indo-European Telegraph Department has charge of that portion of the system of telegraphs between England and Karachi that is owned by the Government of India. The department is administered, under the direct control of the Secretary of State for India in Council, by a Director-in-Chief at the India Office. Its lines are divided into two sections. The first, the Persian Gulf section, includes cables about 1,950 knots in length, running from Karachi to the head of the Gulf and connecting the Indian telegraph lines, which terminate at Karachi, with the Persian section at Bushire and the Turkish telegraphs at Fao. It includes also a cable from Jask to Muscat, the Mekran coast land lines, from Karachi to Jask, about 635 miles, and a new line, commenced in 1905 and completed in 1907, from Karachi *viâ* Panjgur to Nok Kondi, about 484 miles. Nok Kondi is connected with Robat by a wire 140 miles in length, leased from the Indian Telegraph Department. The second section, the Persian, consists of a line from Bushire to Tehran, with a branch, known as the Central Persia line, from Ardistan through Yezd, Kerman, and Bam, to the Indian frontier near Robat. This latter line, the length of which is about 721 miles, was begun in 1902 and completed in 1907. The lines in Persia are worked under concessions granted by the Persian Government. The department also maintains the Tehran-Meshed line, and a new line from Henjam to Bunder Abbas, both of which are the property of the Persian Government. The total length of telegraph line belonging to the department increased during the decade from 1,391 to 2,725 miles, and, the length of wire from 3,471 to 6,983 miles. The length of cable remained stationary. A number of new offices were opened as a result of the extensions, the total number of offices open to the public increasing from 18 to 30. A wireless installation at Jask was taken over by the department in January 1910. The following table shows the financial results of the operations of the department for the 10 years as shown in the departmental reports. The figures under "revenue" represent the final result after the distribution of traffic receipts in accordance with the Cis-Indian Joint Purse and Australian Message Fund agreements with the telegraph companies. The total capital expenditure to the end of 1911–12 was £1,002,539.

——	Revenue.	Working Expenses.	Net Receipts.	Capital Expenditure.	Percentage of Net Receipts on Total Capital Outlay.
	£	£	£	£	
1902–03 - -	99,158	59,853	39,305	53,983	4·50
1903–04 - -	107,173	61,749	45,424	40,590	4·97
1904–05 - -	112,907	71,845	41,062	18,119	4·41
1905–06 - -	111,082	59,458	51,624	26,052	5·39
1906–07 - -	102,674	72,103	30,571	30,713	3·09
1907–08 - -	109,003	75,690	33,313	8,890	3·34
1908–09 - -	103,689	75,287	28,402	1,056	2·85
1909–10 - -	111,489	72,062	39,427	2,121	3·94
1910–11 - -	121,687	74,749	46,938	[– 297]	4·69
1911–12 - -	131,822	72,710	59,112	2,573	5·90

During 1911–12 the working of the Turkish route continued to be unsatisfactory, interruptions between Fao and Constantinople lasting altogether for 80 days. This figure, though worse than that for 1910–11, was much better than those for the three preceding years. Acts of wilful damage again increased (to 1,227) on the Persian section, owing to political disturbances, and the inspection and repair of the lines were carried out under conditions of much difficulty and danger.

Total Financial Results of Government Telegraph Transactions.—The figures quoted in the foregoing sections are those given in the departmental reports. The table below shows the net financial results to Government, year by year, of the telegraphs taken as a whole, as shown in the finance and revenue accounts :—

——	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
	£	£	£	£	£	£	£	£	£	£
Total receipts -	876,979	857,635	897,923	909,854	953,006	1,006,797	978,097	902,851	997,159	1,087,425
Total charges -	909,742	916,824	902,268	1,076,489	1,126,205	1,084,447	1,028,073	992,433	976,832	1,093,934
Net revenue or *charge.*	*32,763*	*59,189*	*4,345*	*166,635*	*173,199*	*77,650*	*49,976*	*89,582*	20,327	*6,509*

The charges as here stated, include capital expenditure.

CHAPTER XIX.

PUBLIC WORKS.

Public Works in India fall naturally into three classes—Railways, Irrigation works, and Buildings and Roads. Military buildings make a fourth class, when separately administered as they now are. These are not dealt with in this chapter; the Military Works Department was in 1899 placed on a wholly military basis, and became part and parcel of the army organisation. Under the head "Buildings and Roads" are included all works that do not come within the first two classes—such as miscellaneous improvements in towns, paving, water supply and drainage, harbours and lighthouses.

The more important railways often run through more than one province, and for other reasons a greater degree of centralisation is necessary in railway administration. The Railway Department is accordingly an Imperial branch of administration, under the direct control of the Government of India. As regards buildings and roads and irriga[redacted] delegation of powers to Provincial Governments has [redacted] Government of India in regard to works [redacted] to the sanction of important [redacted]sional local [redacted]ral of I[redacted]tion was [redacted]ith large irrigation [redacted] subsequently been [redacted]n the Public Works [redacted]buildings, and of other [redacted]rge extent still further [redacted]ict or municipal boards, or [redacted]ublishments, altogether outside [redacted]intained for these purposes.

Public Works administration was up [redacted]partment of the Secretariat, which was in [redacted]uncil. In 1905 the Railway branch of the [redacted]place taken by a Railway Board (as to which some [redacted]). The Board was placed under the new Depart- [redacted], but this arrangement was modified in 1908, when [redacted]llectively the Railway Department, independent of [redacted]riat, though remaining in the administrative [redacted]eil. Meanwhile the remaining sections of the [redacted]t is, dealing with irrigation and civil works) were [redacted]enue and Agriculture Member of Council, and the [redacted]appeared.

[redacted] irrigation, each of the major provinces has its [redacted], at the head of which are one or more (generally [redacted] also Secretaries for Public Works matters to the Local [redacted]ce is divided into Public Works "divisions," which [redacted]cts, or portions or groups of districts, as the case may be. [redacted] which is under an Executive Engineer, are grouped into [redacted]Superintending Engineers. Under the Executive Engineers are [redacted] who are in training for higher duties, and a staff of subordinate [redacted]ors and overseers.

[redacted]ff of the Department is made up of civil engineers trained and [redacted]d, together with a certain number of Royal Engineer officers, [redacted]f engineers recruited in India.

[redacted]s of the first two classes have been placed in the "Imperial" [redacted] the third class in the "Provincial" service. Since the closing of [redacted]gineering College at Coopers Hill, in 1906, recruitment in England [redacted] selection from among candidates possessing certain specified [redacted] "Provincial" engineers are natives of India (including in this [redacted]ppeans and Anglo-Indians) and are recruited from the Indian [redacted]r by promotion from the upper subordinate ranks; they perform

(Public Works.)

the same duties, and can rise to the same positions, as the officers of the "Imperial" service, but draw a lower rate of pay in most grades. The "Subordinate" Public Works service is recruited in India from the local engineering colleges, and consists for the most part of Indians.

The following table shows the total strength and composition of the Engineering and Upper Subordinate Establishments for the whole of India, at the beginning and end of the period under review, as given in the departmental lists :—

	On the 30th June 1902.†	On the 30th June 1912.	
		Public Works Department.	Railway Department.
Engineer Establishment :*			
Royal Engineer Officers	65	29	38
Other Military Officers	8	3	1
Civil Engineers—			
Appointed in England	408	445	106
Europeans appointed in India		108	25
Indians appointed in India			11
Special Engineer			
Upper Subordinate Establishment—			
Europeans			
Indians			
Total			

* Excluding Secretariat officers of

† The table in the 1902 lists does n
under the Government of India included a

As the table shows, the great e
recent years has necessitated a consider
officers included in the table, there were through
90 in 1902 and 190 in 1912) of temporary and n
chiefly on irrigation works in the Punjab and on ra

The annual expenditure on public works is met
and partly from the ordinary revenues of the y
borrowed money is expended comprises the rai
are expected to yield sufficient net revenue to co

A statement of the total capital outlay on r
1911–12 is given in Chapter X.*

Railways.

Ownership and Working.—A full account of the workin
given in the Railway Administration Report annually presented
aim of this section is to give a general view of the development o
the decade, without entering into details.

A brief reference to the past history of railway construction in
make clear the present position. Three periods may be distingu
lines were constructed by companies under contracts the main fe
which were that the necessary capital should be raised by th
Government should guarantee interest on that capital at the ra
railways constructed during this period were almost entire
(standard or broad) gauge. The guarantee system was found
charge on the revenues of India, and in 1869 it was decided that i
should itself undertake the work of construction. During th

* *See* page 163.

mileage of open lines was doubled: many of the new lines were on the 3-ft. 3⅜-in. (metre) gauge, which has since developed at about the same rate as the broad gauge, though it was at first regarded as a temporary expedient, for lines considered to be of secondary importance. In 1879 companies were again allowed to enter the field, and construction has since been carried on partly by the State and partly by companies. Most of these modern companies have received financial assistance, in some form or other, from Government, extending in some cases to a guarantee of interest, and in practically every case they have been provided with land free of cost. The Government has thus been able, when arranging for the construction or working of railways by companies, to reserve to itself a considerable measure of control, the contracts providing, *inter alia*, that the rates and fares charged shall be within maxima and minima approved by Government.

By far the greater part of the Indian railway system is now owned (though not necessarily worked, as will be seen from the figures given below) by Government. The systems of the last of the old guaranteed companies were acquired during the period under review—the Bombay, Baroda and Central India Railway in 1905, and the Madras Railway in 1907. The following table shows the distribution of the Indian railways, as regards ownership and working, at the beginning and end of the decade:—

	Route Mileage open.	
	31st Dec. 1901.	31st Dec. 1911.
Lines owned and worked by the State	5,125	6,874
Lines owned by the State but worked by companies	13,387	17,949
District boards' lines (worked by companies)	54	155
Line leased by the State (worked by a company)	—	79
Old Guaranteed Companies' lines	1,334	—
Companies' lines guaranteed under modern contracts	32	32
Branch line companies' railways assisted under "rebate" terms	2,276*	1,171
Assisted companies' lines subsidised by Government		554
" " " " district boards		265
" " " receiving land only		1,646
Unassisted companies' lines	42	66
Native State lines worked by Native States	1,229	1,662
" " " companies	1,584	2,056
" " " State railway agency	235	257
Lines in foreign territory	74	74
Total	25,373	32,839

* The returns for 1901 do not subdivide assisted companies.

The only lines of any magnitude not owned by Government are the Southern Punjab, a rebate-aided line, and the Bengal and North-Western, which receives no financial assistance (though land was granted free). In the case of all the lines not already acquired, Government holds a right of purchase at certain dates, and within the next twenty years all the railways now existing in British India (with one or two trifling exceptions) may, if Government should so desire, become State property.

It is unnecessary to refer here to the arrangements and re-arrangements made with the various companies during the decade. Detailed information is given in the annual Administration Report.

Branch Line Terms.—An account was given in the last decennial number of this Statement of the progressive offers made in 1893, 1895, and 1896 with a view to encouraging the investment of capital in branch and "feeder" lines to the main railway systems. The terms promulgated in 1896 having, like the earlier terms, practically failed of their object, revised terms were promulgated in June 1910. These terms provide, among other concessions, for an increase in the rate of guarantee from 3 to 3½ per cent., and of rebate from 3½ to 5 per cent., with equal division of surplus profits over 5 per cent. in both cases. They also give the State the right to purchase before the full contract period in certain eventualities. Efforts have also been made to get lines of purely local importance financed by district boards on the security of their local revenues, where these revenues are in a sufficiently flourishing condition, and in

(Railways.)

Madras provision has been made for the levy of a special cess for the purpose of railway construction. Up to the end of 1911, some 155 miles of line had been constructed in Madras under these arrangements, and about 265 miles in Bengal.

Administrative Arrangements.—The Railway Board.—The general question of railway administration received much attention during the period under review, and two special inquiries were conducted, the first by Mr. T. Robertson, C.V.O., in 1901–03, and the second by the Committee on Indian Railway Finance and Administration appointed by the Secretary of State in 1907. The Reports submitted were presented to Parliament.* Mr. Robertson's first recommendation was carried out in 1905, when the control of railway administration was transferred from the Public Works Department of the Government of India to an expert Railway Board, consisting of a chairman and two members. The duties assigned to the Board were of two kinds. Its deliberative functions included the preparation of the railway programme of expenditure, and the discussion of the greater questions of railway policy and finance affecting all lines. As regards such questions, the ultimate decision necessarily continued to rest with the Government of India and the Secretary of State in Council. Its administrative duties included the construction of new lines by State agency, the carrying out of new works on open lines, the improvement generally of railway management, the arrangements for through traffic, the settlement of disputes between lines, the control and promotion of the staff on State lines, and general control over the working and expenditure of companies' lines. The final authority in regard to these duties was delegated, subject to restrictions, to the Railway Board.

The main object of the change made in 1905 was to establish a body that would dispose of business with greater expedition and efficiency than the department that it superseded. The Committee of 1907 came to the conclusion that the system under which the Railway Board worked was not satisfactory, and suggested improvements. After consideration of their recommendations, it was decided to introduce in 1908 certain changes, the Chairman of the Board becoming President, with enhanced powers, and the Board being made independent, as already noted, of the Commerce and Industry Department Secretariat.

Details of Working during the Decade.—The following table gives the total figures for each year, under the main heads, for the whole of the Indian railways, including those in the Native States and in foreign territory. The contributions to the totals of the lines in foreign territory, the aggregate length of which remained at 73·6 miles throughout the decade, were, relatively speaking, insignificant. In the case of the large totals, round numbers are given :—

——	Length of Line open at end of Year.	Capital Outlay to end of Year on Open Lines, including Ferries and Suspense.	Number of Passengers carried.	Weight of Goods carried.	Gross Earnings, including Steamboat Service.	Working Expenses, including Steamboat Service.	Net Earnings.	Percentage of Net Earnings on Capital Outlay on Open Lines.
	Miles.	£		Tons.	£	£	£	
1902	25,930*	212,286,000	196,648,000	45,537,000	22,618,000	11,137,000	11,481,000	5·41
1903	26,956*	222,976,000	210,231,000	47,684,000	24,005,000	11,407,000	12,598,000	5·65
1904	27,565*	231,941,000	227,097,000	52,051,000	26,446,000	12,526,000	13,920,000	6·00
1905	28,295*	239,012,000	248,157,000	54,936,000	27,799,000	13,302,000	14,497,000	6·07
1906	29,097*	247,513,000	271,063,000	58,869,000	29,424,000	14,681,000	14,743,000	5·96
1907	29,957	261,246,000	305,865,000	62,099,000	31,537,000	16,216,000	15,321,000	5·86
1908	30,576	274,611,000	321,169,000	62,398,000	29,885,000	18,002,000	11,883,000	4·33
1909	31,490	286,555,000	329,380,000	60,902,000	31,376,000	17,590,000	13,786,000	4·81
1910	32,099	292,698,000	371,576,000	65,603,000	34,095,000	18,105,000	15,990,000	5·46
1911†	32,839	300,045,000	389,863,000	71,268,000	36 853,000	19,226,000	17,627,000	5·87
1912†	33,494	308,504,000	431,212,000	84,432,000	40,833,000	20,213,000	20,620,000	6·68

* These figures include some short sections of line for which information as to capital outlay, &c. is not available. For total mileage at the beginning of 1902, *see* the next table.

† Provisional figures.

The great expansion that is noticeable in all the figures is most marked in the number of passengers carried. The total under this head for 1912 was considerably more than double that for 1902, and the increase in the weight of goods carried was not much less remarkable.

* Cd. 1713 of 1903 and Cd. 4111 of 1908.

LIBRARY
OF THE
BOMBAY
BRANCH
OF THE
ROYAL ASIATIC SOCIETY

INDIA
SHOWING RAILWAYS
Open and under construction on 31-3-12.
REFERENCES
JHARIA & RANEEGUNGE COAL FIELDS
BOMBAY
CALCUTTA
MADRAS
CEYLON
AGRA
CAWNPORE JR.
CITY
CANTONMENT
AFGHANISTAN
BALUCHISTAN AGENCY
RAJPUTANA AGENCY
NEPAL
BHUTAN
BURMA
SIAM
CHINA
ARABIAN SEA
BAY OF BENGAL
ANDAMAN ISLANDS
NICOBAR ISLAND
Gulf of Mannar
Gulf of Cutch

Extension of Railway System.—The progress made in the construction of new lines will be most readily gathered from the accompanying map. The broad and metre gauge systems each increased by over 3,000 miles between 1901 and 1912; while the narrow gauges made notable progress. Of the total route mileage at the end of 1911, 30,387 miles was single line. Taking into account double lines and sidings, the total track mileage open was 42,113 miles. The length of line under construction or sanctioned for construction at the end of 1912 was 2,378 miles, including 1,048 miles broad gauge, 502 miles metre gauge, and 824 miles 2 ft. 6 in. gauge.

	Mileage open for Traffic at end of Year.		
	1901.	1911.	1912.*
Broad gauge (5 ft. 6 in.)	14,057	17,050	17,206
Metre gauge (3 ft. 3⅜ in.)	10,506	13,760	14,193
Special gauges (2 ft. 6 in. and 2 ft.).	810	2,029	2,094
Total	25,373	32,839	33,494

* Provisional figures.

Among the new lines opened during the decade two of the most important were the Nagda-Muttra line, shortening the journey between the United Provinces and Bombay and opening up new country in Rajputana, which was completed in 1909, and the line from Dhanbaid to Manpur, completing the East Indian Railway Grand Chord, or direct route between Benares and Calcutta, which was opened throughout in 1907. Other lines that may be specially noticed are the Quetta-Nushki line, opened in 1905, and the Kalka-Simla line, opened in 1903. During the decade also the lines in Assam were joined up with one another and with the lines in Bengal, and there was a marked development of narrow-gauge lines in the Central Provinces.

The project for establishing railway connection between India and Ceylon made notable progress. The South Indian Railway was carried to the furthest point on the mainland of India by the opening of the Madura-Mandapam line towards the end of 1902. During the years 1906–08 a further section of the connecting link was provided by the extension of the Pamban branch from Pamban, on the island of Rameswaram, to Dhanushkodi, the southernmost point of the island. To establish through communication with Ceylon, the further steps required were: (i) the extension of the Ceylon railway to Manaar (this has been taken in hand by the Ceylon Government); (ii) the establishment of a ferry between Manaar and Dhanushkodi, which has been undertaken by the South Indian Railway Company; and (iii) a railway connection between Pamban and Mandapam, the terminus of the South Indian Railway on the mainland of India; a steel viaduct, with a rolling lift bridge over the Pamban channel, is being provided. The possibility of ultimately displacing the ferry by a bridge on Adam's Reef has also been under consideration.

The construction of a bridge over the Lower Ganges near Sara, which was sanctioned in 1908, has made good progress. By the end of 1912 more than two-thirds of the total quantity of earthwork required for the approaches had been completed, five well foundations had been completed, and two piers had been built. The bridge, the construction of which is an engineering project of the first magnitude, will link up the metre and broad gauge sections of the Eastern Bengal State Railway.

Capital Expenditure.—The majority of the Indian railways—all, that is, that are owned by Government or by guaranteed companies—depend for the supply of capital on allotments made in the annual programme of expenditure that Government undertakes to meet. The Committee of 1907 recorded their opinion "that no definite "limit could be assigned at the present time to the amount that could be remunera- "tively devoted to the development and expansion of the Indian railway system, "and that, apart from the existing lines, improvements of which are continually "demanded, there is wide scope for the construction of new lines which would not "only be remunerative in themselves, but would add materially to the prosperity of "the population, greatly enhance the revenue, and largely develope the resources "of the country." For some years to come, therefore, the effective limit of the amount to be spent in any year would be the amount that could be provided, and the Committee, after considering the practical financial questions involved, recommended that the programme of annual expenditure on railway construction and development should for the present be fixed at £12,500,000.

In view of the conditions actually prevailing in subsequent years, it has not been found possible, up to the present, to work up to this figure. The following table

(Railways.)

shows the capital expenditure for each year, for the whole of the Indian railways, under the three heads "new lines," "rolling stock," and "improvements of existing lines." The figures in the last column take into account additions to and reductions of the stores balance:—

	On New Lines.	On Rolling Stock.	On Improvement of existing Lines.	Total Capital Outlay (including Suspense).
	£	£	£	£
1902 - -	4,076,000	1,893,000	1,569,000	7,729,000
1903 - -	3,946,000	1,750,000	1,366,000	7,769,000
1904 - -	4,597,000	1,282,000	2,103,000	8,180,000
1905 - -	4,816,000	1,734,000	2,683,000	9,908,000
1906 - -	4,009,000	2,504,000	2,626,000	9,777,000
1907 - -	3,519,000	2,826,000	2,630,000	10,948,000
1908 - -	2,284,000	5,152,000	3,464,000	12,480,000
1909 - -	2,447,000	4,787,000	3,971,000	10,078,000
1910 - -	2,940,000	2,012,000	3,713,000	7,635,000
1911 - -	3,282,000	2,342,000	3,819,000	*

* Figure not available.

The principle was followed throughout of providing for the needs of open lines, especially in regard to rolling stock, and lines already under construction, before deciding to undertake the construction of new lines. The transport facilities available, however, failed to keep pace with expanding trade requirements, and the great increase in the figures in the second and third columns of the above table in 1908 and 1909 marks the effort then made to satisfy the demand for additional rolling stock, to utilise which to proper advantage increased expenditure on open lines was also necessary.

Passenger and Goods Traffic.—As has already been seen, the total number of passengers increased very greatly during the period under review. It is to be noted that, as the figures in the margin show, this enormous increase was almost entirely accounted for by the third-class passengers, who were throughout the decade carried at an average rate of five miles, or rather more, for a penny. The "intermediate" class, with an average of about four miles a penny, was little more expensive, and also showed a large proportional increase. The average rate charged for first-class passengers was rather more than a penny a mile, and for second-class about a halfpenny a mile. The average distance travelled in 1911 was 37 miles. Various steps were taken during the decade to raise the standards of comfort and security for passengers, and especially for third-class passengers. Though the goods traffic did not show as large a proportionate increase as the passenger traffic, it continued to contribute by far the larger share of the gross earnings (59 per cent. in 1911 as against 33 per cent. from passenger traffic). Grain, pulse, and coal, account for more than half of the weight, and nearly half the earnings from goods. The average rate for all descriptions of goods carried works out at less than a halfpenny per ton per mile.

Number of Passengers (in thousands).	1901.	1910.	1911.
1st class - - - -	532	778	799
2nd class - - - -	2,405	2,962	3,135
Intermediate class - -	6,670	11,033	11,762
3rd class - - - -	170,416	332,461	348,478
Season and vendors' tickets*	14,726	24,341	25,687

* Counted once only.

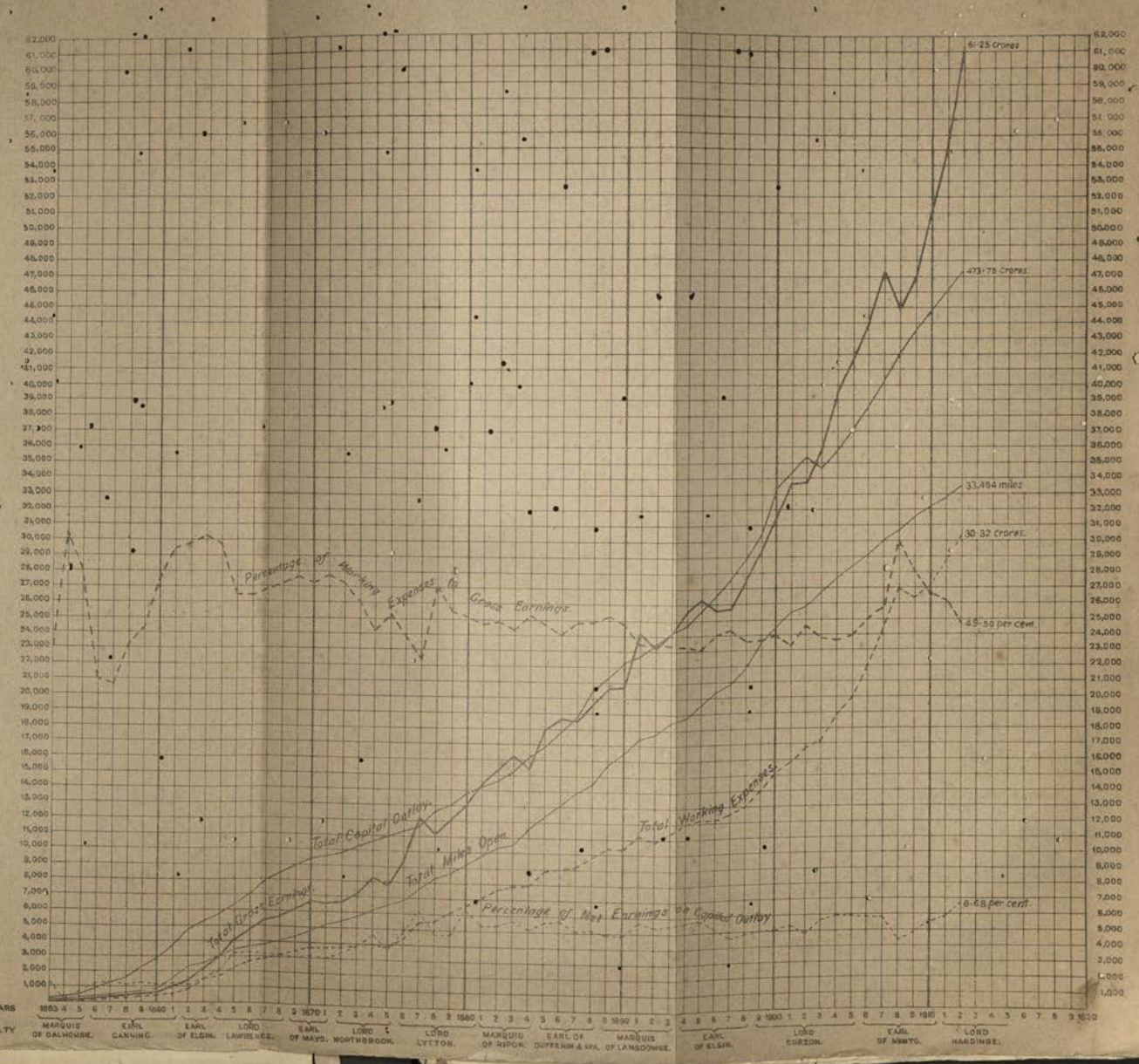
Railway Staff.—Strikes.—The table in the margin shows the total number of employés, divided according to race, at the beginning and end of the period under review.

	1901.	1911.
Europeans - -	5,489	7,699
Anglo-Indians -	8,182	9,877
Indians - -	356,766	545,454
Total - -	370,437	563,030

Several small strikes of different classes of employés occurred during 1906 and 1907 on certain lines, and the discontent prevailing on the Eastern Bengal State Railway culminated in an extensive strike on the part of native drivers and firemen, which caused a temporary dislocation of goods traffic. On the East Indian

INDIAN RAILWAYS.

DIAGRAM SHOWING, FOR EACH YEAR, THE TOTALS UP TO 31st DECEMBER 1912 FOR CAPITAL OUTLAY, GROSS EARNINGS, WORKING EXPENSES, MILES OPEN, PERCENTAGE OF NET EARNINGS ON CAPITAL OUTLAY AND PERCENTAGE OF WORKING EXPENSES TO GROSS EARNINGS.



NOTE.

The figures on the scale represent lakhs for the Capital Outlay, tens of thousands for Gross Earnings and Working Expenses, and Miles for Open mileage.

In the case of Percentage of Net Earnings on Capital Outlay and Percentage of Working Expenses to Gross Earnings, each square represents one and two per cent. respectively.

The "Total Capital Outlay" is that on all Indian railways, viz., (i) open, (ii) partly or wholly under construction, and (iii) on miscellaneous items; while for the purposes of the "Percentage of Net Earnings on Capital Outlay" (i) alone is reckoned.

[The decrease in the Total Capital Outlay in 1903 is due to revision of the outlay hitherto adopted for lines purchased by the State from Guaranteed Ry. Companies.]

[All figures for the year 1912 are approximate.]

Railway the European and Eurasian drivers of Howrah-Jhaja district, after submitting a lengthy list of grievances, struck work in November 1907 and were joined to a large extent by the traffic staff, the strike extending to other districts and involving a large portion of the line. This strike was the most serious in the history of railways in India, and for a time completely dislocated traffic generally, and the trade of Calcutta in particular. It was only terminated by the appointment by the Government of India of a special Board of Conciliation (on the lines of the boards recently introduced in England) to consider the representations of the men. In May 1909 a strike of drivers on the Madras and Southern Mahratta Railway disorganised the train service for a few days.

Accidents.—The following is a statement of accidents of all descriptions to persons, which have occurred during the last ten years :—

Year.	Passengers.				Servants.				Other Persons.								Total all Classes.	
	From Accidents to Trains, Rolling-stock, Permanent-way, &c.		By Accidents from other causes, including Accidents from their own want of caution or misconduct.		From Accidents to Trains, Rolling-stock, Permanent-way, &c.		By Accidents from other causes, including Accidents from their own want of caution or misconduct.		Whilst passing over Railways at Level Crossings.		Trespassers.		Suicides.		Miscellaneous, not included in preceding Columns.			
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Average 1902–4	63	128	99	314	25	98	265	373	29	14	543	173	122	4	32	21	1,177	1,124
Average 1905–7	19	161	140	394	31	128	351	486	44	30	801	245	159	7	38	32	1,584	1,481
Average 1908–10	51	198	167	477	37	138	368	542	42	31	1,085	281	191	8	34	37	1,975	1,713
1911 - -	12	134	198	565	27	125	396	666	49	39	1,126	301	223	8	47	31	2,078	1,869

The number of passengers killed in 1911 from causes beyond their own control was thus about one in 33 millions, which gives an average of one for every 1,198 millions of miles travelled.

Financial Results to the State.—The net profit to the State, after meeting all charges for interest on capital, annuities for the purchase of lines from companies, shares of surplus profits payable to companies, &c., in each of the years under review, is shown in the first column of the table in the margin. As the charges under the head of "annuities for the purchase of railways" represent not only interest charges but also the repayment of capital, the real net profits to the State, after meeting all charges properly attributable to revenue, were greater than appears from these figures. The second column shows the amount of capital redeemed in each year, according to actuarial calculations, by means of annuity and interest payments.

	£	£
1902–03 -	224,581	592,134
1903–04 -	853,120	612,431
1904–05 -	2,097,589	633,450
1905–06 -	1,903,826	727,695
1906–07 -	2,307,673	752,135
1907–08 -	1,563,002	777,553
1908–09 -	[—*1,242,250]	865,635
1909–10 -	824,922	925,605
1910–11 -	2,017,496	957,451
1911–12 -	3,787,770	1,001,452

* Net loss.

The figures stand in remarkable contrast to those for earlier years. Up to the end of 1898–99 the railways in respect of which Government is financially responsible worked at a loss to the State, owing partly to the increased payments to certain guaranteed companies necessitated by the fall of exchange and partly to the yearly additions of new and undeveloped lines; but with the termination of the old guarantee of the Great Indian Peninsula Railway and the development of traffic, the revenue has, except for the single set-back in 1908–09, exceeded the expenditure. The deficit in 1908–09 resulted from a fall in gross receipts, attributed mainly to the general trade depression in that year, accompanied by an increase in working expenses largely due to inevitable expenditure on schemes of improvement previously launched.

(Railways.)

The following table, compiled from the Finance and Revenue Accounts, gives detailed figures for 1911–12 :—

	Imperial.	Provincial.	England.	Total.
Revenue.	£	£	£	£
Railways—				
State railways—(Gross traffic receipts) -	33,571,135	7,764	230	33,579,129
Subsidised companies—(Repayment of advances of interest).	12,820	—	44,825	57,645
Total - - - £	33,583,955	7,764	45,055	33,636,774
Expenditure.				
Railway Revenue Account—				
State Railways—				
Working expenses - - - -	17,257,441	5,607	—	17,263,048
Share of surplus profits, &c. - -	482,001	—	—	482,001
Interest on debt - - - -	2,832,128	—	3,446,942	6,279,070
Annuities in the purchase of railways -	—	—	3,357,301	3,357,301
Sinking funds - - - -	—	—	177,677	177,677
Interest chargeable against companies on advances - - - - -	209,640	—	175,500	385,140
Interest on capital deposited by companies -	178,680	—	1,647,290	1,825,970
Subsidised companies—				
Land, &c. - - - - -	59,747	879	—	60,626
Miscellaneous railway expenditure - -	17,493	677	—	18,171
Total - - - £	21,037,130	7,164	8,804,710	29,849,004
			Net gain -	£3,787,770

Irrigation.

Some general account of irrigation in India has already been given in the chapter on Agriculture.* The irrigation works coming within the scope of the Public Works Department, with which this chapter deals, belong entirely to the canal and tank classes. Well-irrigation will therefore not be referred to here. For departmental purposes, irrigation works in India are divided into two main classes, viz., "major" and "minor" works. Major works are subdivided into—

(*a*) "Productive" public works, the capital cost of which is usually provided from borrowed money;

(*b*) "Protective" works, designed as a protection against famine, the capital cost of which is provided from current revenues.

Capital and revenue accounts are kept for all major works.

Minor works are constructed from funds provided also out of the current revenues of India, and, broadly speaking, consist of irrigation systems which are not sufficiently important to treat as major works. Some of them are old works constructed by the former rulers of the country, and extended or restored by the British Government; some are works which have been constructed by the British Government; others, again, are village works originally provided by private or communal effort, the control of which the State has been obliged to assume owing to disputes between the parties interested or their inability to maintain the efficiency of the works.

Capital and revenue accounts are maintained for the more important minor works; but for those on which the capital outlay has not exceeded half a lakh of rupees, revenue accounts only are, as a rule, maintained. There is a third class of minor works, consisting for the most part of small tanks, for which neither capital nor revenue accounts are kept. These exist principally in the Madras Presidency.

Productive public works are expected to yield within ten years of their completion sufficient revenue to pay their working expenses and the interest on the capital expended on their construction, including excess of interest over receipts during the ten years after completion. No project is now sanctioned as a productive public work unless it can be shown beyond reasonable doubt that when fully developed it will fulfil these conditions.

* *See* page 224.

The major works do not consist entirely of river works and canals. The irrigation works in the Punjab, Sind, the United Provinces, and Bengal are all of this type; but those in Madras, the Central Provinces, and the Bombay Deccan include some purely storage works, and some canals with which large storage works are combined.

The Irrigation Commission, 1901–03.—During the famines that occurred in nearly every province of British India and in most of the Native States between 1896 and 1901, the protective value of irrigation was very plainly shown, in spite of failures of some of the smaller storage works, and the question naturally arose whether this protection might not be extended in those tracts in which the most severe distress had occurred. The general question of irrigation, particularly in its bearing upon famine, was referred to a Commission in 1901. The Commission's report was presented to Parliament.* It expressed the opinion that the field for the construction of new works of any magnitude on which the net revenue would exceed the interest charges was restricted to the Punjab, Sind, and parts of Madras, and that the tracts in which most of such works could be constructed were not liable to famine. Where protective irrigation was most urgently required—in the Deccan districts of Bombay and Madras, the Central Provinces, and Bundelkhand—the Commission found that there was no prospect of new irrigation works on any considerable scale proving directly remunerative; but they recommended that works should be undertaken in these tracts with a view to reducing the cost and mitigating the intensity of future famines. The Commission reviewed all the irrigation works of importance in every province of India, pointed to a great number of suggested projects, and recommended a thorough investigation of the irrigation capabilities of every part of India. They sketched out a rough programme of works for the next twenty years to add 6½ million acres to the irrigated area at an estimated cost of nearly £30,000,000. The Report gave a great impetus to the growth of irrigation in India. The systematic investigations that followed indicated that the possibilities of irrigation were even greater than had been contemplated by the Commission. Expenditure on irrigation rose, not only to the amount, £1,467,000 a year, suggested by the Commission, but to a considerably higher figure. The recommendations of the Report, with few exceptions, have been accepted by the Government of India, and form the basis of its policy.

Working during the Decade.—The table below gives the mileage of canals in operation (excluding navigation works) and the area irrigated in British India as a whole, by State works, for each year, with the total capital expenditure and the percentage of net revenue, as shown in the departmental reports:—

—	Major Works.								Minor Works.*			
	Productive.				Protective.							
	Mileage in operation, including Distributaries.	Area irrigated during the Year.	Total Capital Outlay (direct and indirect) to end of Year.	Percentage of Net Revenue on Capital Outlay.	Mileage in operation, including Distributaries.	Area irrigated during the Year.	Total Capital Outlay (direct and indirect) to end of Year.	Percentage of Net Revenue on Capital Outlay.	Mileage in operation, including Distributaries.	Area irrigated during the Year.	Total Capital Outlay (direct and indirect) to end of Year.	Percentage of Net Revenue on Capital Outlay.
		Acres 000 omitted	£ 000 omitted			Acres 000 omitted	£ 000 omitted			Acres 000 omitted	£ 000 omitted	
1901–02	31,376	11,297	23,423	6·78	1,309	351	1,535	2·56	7,022	2,428	2,403	8·91
1902–03	32,504	11,462	24,078	7·42	1,327	370	1,584	2·61	6,465	2,256	2,413	8·05
1903–04	34,706	12,624	24,679	7·55	1,428	384	1,660	2·9	5,883	2,187	2,466	8·29
1904–05	35,089	12,207	25,062	7·67	1,368	434	1,813	1·97	5,937	1,977	2,575	7·26
1905–06	35,730	14,205	25,669	7·18	1,370	471	2,086	1·93	5,941	2,139	2,671	6·96
1906–07	35,588	13,337	26,785	8·67	1,218	214	2,121	1·03	6,009	2,248	2,724	8·49
1907–08	37,704	13,959	23,052	7·67	1,481	327	2,497	1·18	4,135	1,796	2,377	6·53
1908–09	38,527	14,115	29,106	7·64	1,718	358	2,863	·47	4,172	1,967	2,452	7·98
1909–10	39,346	13,945	30,286	7·36	2,039	306	3,249	1·04	4,168	1,890	2,438	7·99
1910–11	39,471	13,868	31,527	7·18	2,435	295	3,611	·77	4,243	1,909	2,485	8·05
1911–12	40,455	14,952	33,132	7·52	2,683	328	3,984	·65	4,315	1,819	2,533	7·78

* Including only minor works for which capital accounts are kept. The remaining classes of minor works, for which revenue accounts only, or neither capital nor revenue accounts are kept, irrigated between 5 and 7 million acres a year. They are especially important in Madras and Sind.

* Cd. 1851 of 1903.

(Irrigation.)

Of the total mileage, main canals contributed 12,368 miles in 1902 and 14,453 miles in 1912.

The figures, being for canals in operation only, do not give a complete idea of the progress made during the decade. Some of the largest works undertaken had not come into operation at the end of 1911–12. As the expenditure on these works is included in the figures of capital outlay, the revenue returns also are not shown in as favourable a light as they might be. The financial results are separately dealt with below.

The marked decrease in the figures in the first two columns under the head "Minor Works" is explained by the transfer of works in several provinces, as noted below, from the "minor" to the "productive" class.

The estimated value of the crops grown in 1910–11 on the lands irrigated by the works included in the above table was over £37,000,000.

Navigation Canals.—A certain number of the irrigation canals are utilised for navigation, but the exigencies of irrigation and navigation are obviously not always compatible, and the results cannot be said, on the whole, to be successful. Navigation is in no case directly remunerative, and in many cases the receipts do not cover the working expenses. The most important navigable systems of irrigation works are in Madras and Bengal, where there were in 1911 some 1,330 and 1,788 miles, respectively, of canal open for navigation. The traffic in both cases is considerable. The Punjab and United Provinces also have each over 400 miles of canal open for navigation. These figures include, in the case of Madras and Bengal, some important canals constructed solely for purposes of navigation. None of them show satisfactory financial results.

Irrigation Revenue.—The revenue receipts from Government irrigation works are derived almost entirely from the charges made for water or for water advantages, which depend throughout India not on the volume of water supplied, but on the kind of crops cultivated and the areas actually or ordinarily irrigated. There are considerable differences in the manner in which the irrigation revenue is assessed and collected. In Madras, Sind, and parts of other provinces, the charge for water forms part of the land revenue assessment, and a proportion of the gross receipts from land revenue is accordingly credited to irrigation. This system has many advantages where, as in Southern India, water is delivered to the same fields for the same crop year after year, and where the practice is in accordance with immemorial usage; but it was found to be inapplicable in the areas in Northern India where the new canals were carried into tracts where irrigation was before unknown, and water was applied to various crops, and to different fields in different seasons. In the Punjab, the United Provinces, and Bengal, the charge for water is, generally speaking, distinct from the land revenue assessment, and is levied in the form of a water rate on the occupier. In Bengal, a system of long water leases obtains; in the other cases the rate is chargeable only in respect of fields for which water has actually been taken, and the revenue fluctuates according to the character of the season. It has been found that the system of occupier's rates does not prevent a rise in rents due to water advantages; in the Punjab and United Provinces, where the land revenue has not been permanently settled, a share of this increase can be taken in the form of land revenue on the revision of a settlement, while during the currency of a settlement, a separate "owner's rate" may be levied. The charges for irrigation, in whatever way they are levied, vary greatly, depending on the kind of crop, the quantity of water ordinarily required for it, and the time when it is required, the quality of the soil, the intensity or constancy of the demand, and the value of irrigation in increasing the out-turn. The average rate realised on major works from irrigation of all kinds is about 3½ rupees per acre.

Financial Results.—The following table, which shows in round figures the total financial result for each year, includes all irrigation and navigation works, major and minor, in British India, for which full accounts are kept:—

(Irrigation.)

	Total Capital Outlay (direct and indirect) to end of Year.	Gross Receipts.	Working Expenses.	Net Revenue* (leaving out of account Charges for Interest).	Percentage of Net Revenue on Total Capital Outlay.
	£	£	£	£	
1901–02	28,908,000	2,781,000	937,000	1,844,000	6·4
1902–03	29,648,000	3,002,000	972,000	2,030,000	6·8
1903–04	30,415,000	3,131,000	1,023,000	2,108,000	6·7
1904–05	31,080,000	3,247,000	1,092,000	2,155,000	6·9
1905–06	32,094,000	3,220,000	1,147,000	2,073,000	6·5
1906–07	33,329,000	3,762,000	1,192,000	2,570,000	7·7
1907–08	34,543,000	3,566,000	1,235,000	2,331,000	6·7
1908–09	36,172,000	3,692,000	1,257,000	2,435,000	6·7
1909–10	37,779,000	3,783,000	1,318,000	2,465,000	6·5
1910–11	39,457,000	3,846,000	1,359,000	2,487,000	6·3
1911–12	41,510,000	4,116,000	1,390,000	2,725,000	6·6

* Minor works for which capital accounts are not kept produced, according to the departmental figures, a net revenue of from £400,000 to £600,000 a year.

The contribution made by "navigation" to the total figures is relatively small. The figures given separately under that head, for purely navigation works, are as follows:—

	Total Capital Outlay to end of Year.	Gross Receipts.	Working Expenses.	Net Revenue.	Percentage on Capital Outlay.
Major works:	£	£	£	£	
1901–02	174,300	3,200	2,000	1,200	·69
1911–12	174,300	4,200	2,400	1,800	1·04
Minor works:					
1901–02	1,372,000	33,500	28,200	5,300	·39
1911–12	1,687,000	44,100	35,800	8,300	·49

It has already been mentioned that the figures of capital outlay include expenditure on works still under construction. A more accurate idea of the financial results attained is to be obtained by excluding this expenditure. Up to the end of 1910–11, the last year for which figures classified in this way are available, the total capital expenditure on major works in operation was: Productive works, £27,228,000; protective works, £2,776,000. Works of the two classes under construction were shown as accounting respectively for £4,299,000 and £807,000. The percentage of net revenue on capital outlay on works in operation was, in 1910–11, for productive works 8·26, for protective works 1·01. The standard now laid down for productive works was not attained in the case of some of the earlier irrigation projects in Bengal, Bombay, and Madras, expenditure on which is now charged against current revenues, though they remain on the list of productive works. Leaving these out of account, the remaining productive works paid in 1910–11 over 10 per cent. on their capital outlay, and had up to the end of that year contributed to the general revenues of the country, after paying interest charges, over £25,000,000, a sum considerably in excess of their capital cost. The working of the unsuccessful "productive" works referred to above had, on the other hand, involved a total loss of some £7,000,000, though they had been of great indirect value. The return on capital was highest in the Punjab, where the canals yielded 13·66 per cent. The figures so far given are taken from the departmental reports; the figures of net revenue quoted do not take into account interest charges, which were calculated in 1911–12 at £1,319,000 altogether. The net revenue for each year of the decade,

	£
Major Works:	
Direct Receipts	2,381,533
Working Expenses	*1,145,103*
	1,236,430
Portion of Land Revenue due to Irrigation	1,351,465
	2,587,895
Interest on Debt	*1,182,867*
Net Receipts from Major Works	1,405,028
Minor Works and Navigation:	
Receipts	247,054
Charges	*846,913*
Net Charges for Minor Works	*599,859*
Total Net Receipts	805,169

as shown in the Finance and Revenue Accounts, is given in the chapter on Finance. In these accounts minor works are credited with direct receipts only, excluding in particular large receipts from land revenue credited in the departmental accounts. The table in the margin shows how the figure for 1911–12 is calculated.

For the purposes of more detailed treatment, the provinces may best be dealt with separately.*

Bengal and Bihar and Orissa.—

	Productive Works.		Protective Works.		Minor Works.	
	1901–02.	1911–12.*	1901–02.	1911–12.†	1901–02.	1911–12.†
Capital outlay to end of year (£)	4,113,000	4,140,000	29,900	446,000	47,000	48,000
Mileage in operation	3,383	3,505	—	145	24	19
Area irrigated (*acres*)	841,000	865,000	—	24,000	—	—
Percentage of net revenue on capital outlay	·86	1·68	—	‡	‡	‡

* Including Bihar and Orissa. † Bihar and Orissa. ‡ Receipts less than working expenses.

In Bengal the rainfall is, generally speaking, so great that water is not in constant or regular demand, and State irrigation works have not hitherto been remunerative. In Eastern Bengal and Assam the rainfall is abundant, and there is no demand for large irrigation works. Three irrigation works classed as "productive" were in operation throughout the decade—the Orissa, Midnapur, and Sone Canals. The area irrigated by these canals increased somewhat, and the financial results obtained showed some improvement; it is reported that their indirect value is beyond question, crops of great value being raised on the irrigated areas. Two protective works were constructed during the decade, the Dhaka Canal, opened in 1906, and the Tribeni Canal, the upper half of which was opened in 1911. All of these works, except the Midnapur Canal, are in the area now included in the new province of Bihar and Orissa.

The navigation works in Bengal and Bihar and Orissa comprise the Hijili Tidal Canal, 29 miles long, which is classed as a productive work, and other canals, classed as minor works, the total length of which increased during the decade from 865 to 1,266 miles. The figures for the navigation canals are not included in the above table. In 1911–12 their gross receipts amounted to £43,100 and the working expenses to £27,900. The capital outlay on navigation works up to the end of the decade amounted to over £1,238,000.

United Provinces.—

	Productive Works.		Protective Works.		Minor Works.	
	1901–02.	1911–12.	1901–02.	1911–12.	1901–02.	1911–12
Capital outlay to end of year (£)	5,573,000	6,331,000	301,000	1,217,000	200,000	219,000
Mileage in operation	8,134	9,443	550	1,304	595	550
Area irrigated (*acres*)	2,453,000	2,252,000	48,800	111,000	116,000	80,000
Percentage of net revenue on capital outlay	5·84	6·98	*	*	1·72	1·87

* Receipts less than working expenses.

The main productive canals of the United Provinces irrigate the area between the Ganges and the Jumna, the Ganges and Lower Ganges Canals, with 520 and 665 miles of main canal respectively, being the largest works. The smaller Eastern Jumna Canal is the most remunerative, having throughout the decade yielded a

* The provincial tables, like those already given, show under minor works only those works for which full accounts are kept.

net revenue of from 20 to 25 per cent. on the capital ou[illegible] 1,309 miles in the total length of productive canals (includ[illegible]s) was due partly to extensions of the existing systems and partly to the inclusion under the head "productive" of some works formerly classed as "minor." The Mat branch of the Ganges Canal, opened in 1903, effected a great improvement in the condition of the dry tract in Aligarh and Muttra, and the Fatehpur-Sikri extension of the Agra Canal, completed in 1910, protects one of the most precarious tracts of the Agra district. South of the Jumna, in Bundelkhand, where the Betwa Canal was, in 1902, the only protective work in the province, some important new protective works have been undertaken, among them the Ken Canal, opened in 1907, and the Dhasan Canal, opened in 1910. As a result the trans-Jumna districts of the province, which were previously so liable to famine, are now fairly well protected. Attention has also been given to the restoration of tanks in Bundelkhand. The further needs of the province in respect of famine protective irrigation schemes are being investigated. In 1911–12, owing to the abnormal seasons, the area irrigated in the *kharif*—1,298,000 acres—was very high, while the *rabi* area—1,144,000 acres—was one of the lowest on record. The total value of crops raised with the aid of canal irrigation was £8,000,000.

Punjab.—

	Productive Works.		Minor Works.	
	1901–02.	1911–12.	1901–02.	1911–12.
Capital outlay to end of year (£) - - -	6,594,000	12,084,000	1,512,000	38,000
Mileage in operation - - - - - -	9,887	11,433	1,494	224
Area irrigated (*acres*) - - - - -	4,111,000	6,841,000	384,000	29,000
Percentage of net revenue on capital outlay -	10·40	16·13*	23·49	†

* Calculated on capital outlay (£7,748,000) on canals in operation only. † Receipts less than working expenses.

The Punjab, with its snow-fed rivers and level plains, offers great facilities for irrigation, and has a more extensive system of irrigation canals than any other [illegible]vince. No canal at present takes out of the Beas, but all the other great rivers [illegible]he Punjab are utilised for the purposes of canal irrigation. In the case of the [illegible]us the canals are all inundation canals, no perennial canal having as yet been [illegible]structed. The canals are for the most part highly remunerative, and the Lower [illegible]enab, the largest of all, has shown remarkable financial results, giving in 1911–12 [illegible]eturn of 34·06 per cent. on the capital expenditure. On both the Lower Chenab [illegible]d Lower Jhelum Canals colonies of selected settlers have been established, and [illegible]ourishing communities have grown up, on what were formerly uninhabited wastes. [illegible]he Chenab Canal Colony was established before the beginning of the decade under [illegible]eview. The work of colonisation in the case of the Jhelum Canal Colony was begun [illegible]1902–03 and completed within the next few years.*

The decrease under minor works shown by the figures given above was due mainly [illegible]the transference of the Upper Sutlej and Indus Inundation canals during the [illegible]ade from the "minor" to the "productive" class. The development of the Lower [illegible]lum Canal also considerably increased the total mileage of productive works in [illegible]ration. But only in the figures of capital expenditure is evidence to be seen of [illegible]was by far the most important work of the decade—that done in connection with [illegible]reat Triple Canal Project, sanctioned in 1904, the canals included in which had [illegible]come into operation in March 1912, though the project is fast approaching [illegible]pletion. The three canals in question are the Upper Jhelum, the Upper Chenab, [illegible]d the Lower Bari Doab. The Upper Jhelum, taking out from the left bank [illegible]the Jhelum river at a point in Kashmir, is intended to carry the surplus waters [illegible]e Jhelum, after the needs of the existing Lower Jhelum Canal have been [illegible]ied, down to the Chenab river above the head-work of the existing Lower [illegible]ab Canal. The idea is to replenish the supply available in the Chenab river, [illegible]to make a like quantity available for the Upper Chenab Canal, which is to [illegible]e off higher up the river. A branch from the Upper Jhelum Canal will at the [illegible]ame time irrigate some 350,000 acres annually in the Gujrat district. The Upper Chenab Canal, the middle link of the Triple Project, is designed to irrigate some

* For further information regarding the Canal Colonies, *see* page 221.

and then to carry on such supplies as may be available from [illegible] Chenab rivers with their canal systems to the river Ravi for utilisation on the third canal, the Lower Bari Doab. This latter has been designed to irrigate nearly 900,000 acres annually, most of which is at present waste, though the soil is stated to be excellent. The head-works are peculiar in that they have been designed to pass water across the river Ravi from one canal to the other, the conditions on that river being such that usually no cold weather supply is available. The total cost of the Triple Project is estimated at about £6,900,000. Work was started on the Upper Jhelum and Upper Chenab Canals in 1905, and on the Lower Bari Doab in 1907. The expenditure up to the end of 1911–12 was: Upper Jhelum £1,712,000, Upper Chenab £1,814,000, Lower Bari Doab £809,000. The Upper Chenab Canal, though not fully completed, was opened in April 1912. The scheme constitutes a very material advance towards converting the Punjab, from the Indus on the west to the Jumna on the east, into a vast irrigated tract permanently insured against famine, and an important granary both for Indian requirements and for export; it is calculated to turn the waters of the Punjab rivers to the greatest advantage, without in any way interfering with the possibility of further schemes for utilising the Beas for the Sutlej valley, and the Indus for the Sind-Sagar-Thal.

The Sutlej Valley Project, now under consideration, aims at utilising the surplus supply of the Sutlej and Beas rivers, and would, besides improving the water supply of the several inundation canals now dependent on the Sutlej, extend the benefits of irrigation into the great desert south of the river. The cost is estimated at £6,000,000 and the irrigable area at 3,000,000 acres.

North-West Frontier Province.—

	Productive Works.		Protective Works.		Minor Works.	
	1901–02.	1911–12.	1901–02.	1911–12.	1901–02.	1911–12.
Capital outlay to end of year (£)	—	990,000	276,000	—	33,000	—
Mileage in operation	—	342	208	—	Not stated.	—
Area irrigated (*acres*)	—	225,000	158,000	—		—
Percentage of net revenue on capital expenditure	—	2·99	9·84	—	14·43	—

A large proportion of the existing canals in the North-West Frontier Provin[illegible] are privately owned, and some of the smaller canals among the remainder a[illegible] managed by the civil department. Of the Government works the Lower Swa[illegible] River Canal, originally planned as a "protective" work, continued to show goo[illegible] results, and since 1906 has been classed as "productive"; the Kabul River Canal formerly a "minor" work, was transferred to the "productive" class about th[illegible] same time. These two canals irrigate respectively areas to the north and south [illegible] the Kabul river. In 1905 two new projects were sanctioned, the Paharpur Can[illegible] taking off the Indus north of Dera Ismail Khan, and the Upper Swat River Can[illegible] taking off the Swat river near Chakdara. The former was completed in 1909, a[illegible] irrigated in 1911–12 some 25,000 acres; the latter, a bold undertaking involving t[illegible] construction of a tunnel over two miles long under the Malakand Pass, has [illegible] good progress. It is estimated to cost over £1,200,000, and to serve the [illegible] irrigable area lying to the north of the Kabul river, irrigating about 381,000 a[illegible] annually. More than half of the capital expenditure shown in the table had b[illegible] incurred on this unopened canal.

Central Provinces and Berar.—

	Productive Works, 1911–12.	Protective Works, 1911–12.	Minor W[illegible] 1911–1[illegible]
Capital outlay to end of year (£)	94,000	555,000	1,700
Mileage completed*	30	492	—
Area irrigated (*acres*)	80	22,000	—
Percentage of net revenue on capital outlay	†	·31	—

* Distributaries only. The works so far constructed are all of the tank class. † Receipts less than working expenses.

In the Central Provinces there were at the beginning of the decade no State irrigation works, though certain rice-growing districts had large numbers of small private tanks. Up to 1896 a complete failure of the rains was hardly known, but the experiences of the famines of 1896–97 and 1899–1900 raised the question of undertaking protective works, and the construction of State works has proceeded rapidly since the date of the Irrigation Commission's report. Cultivators were also encouraged to construct new tanks, and to improve old ones, by giving them a grant-in-aid equal to half the estimated cost of the work, on the condition that the work was designed and constructed under the supervision of the Irrigation Department. The introduction of Government works involved the education of the cultivators up to an altogether new conception of the uses of irrigation and the rates that they could profitably pay for water, and it was necessary at the outset to offer the benefits of irrigation on the most liberal terms to encourage their acceptance. The good crops grown on irrigated lands in the bad season of 1907–08 helped to make clear the advantages of the new facilities, but it is recognised that without an improved system of agriculture it will not be easy to reach a stage at which irrigation will be practised as a matter of course by the general body of cultivators.

The table in the margin shows the total areas irrigated year by year from State works since those first constructed came into operation. In the last two years the demand for irrigation was reduced by the abundant rainfall. The works in operation include only one classed as "productive," the Asola Menda tank, estimated to irrigate 60,000 acres, but not yet completed. Among the "protective" works already constructed, or in an advanced stage of construction, the most important are the Ramtek reservoir in the Nagpur district, to irrigate about 50,000 acres, and the Khairbanda, Chandpur, and Ghorajheri tanks. The first really large work was taken in hand in 1910, when a beginning was made with the construction of the Tandula Canal, which, when completed, should put one half of the Drug district beyond fear of famine. It is estimated to cost £700,000 and to irrigate over 250,000 acres. Two more large canal schemes were sanctioned towards the end of the decade; the [illegible]anadi Canal, estimated to cost £662,000 and to irrigate 360,000 acres annually, [illegible]gh expected to be "productive," will have great protective value, and the hope expressed that it will convert a famine-stricken tract into one of the granaries of [illegible]dia; the Wainganga Canal, estimated to cost £254,000 and to irrigate 79,000 acres, also expected to be directly productive.

	Acres.
1905–06	4,569
1906–07	4,965
1907–08	37,357
1908–09	34,808
1909–10	37,635
1910–11	25,356
1911–12	28,319

Up to the end of 1911–12 about £158,000 had been spent in capital outlay on minor works for which only revenue accounts are kept. The annual grant for minor works is at present fixed at £40,000.

Burma.—

	Productive Works.		Minor Works.*	
	1901–02.	1911–12.	1901–02.	1911–12.
[illegible]pital outlay to end of year (£)	332,000	1,288,000	226,000	262,000
[illegible]ge completed	—	654	—	—
[illegible]irrigated or benefited (*acres*)	—	206,000	440,000	472,000
[illegible]ntage of net revenue on capital expenditure	—	3·46	26·74	28·33

* Embankment works only.

Irrigation is not required in Lower Burma, where the rainfall is regular and [illegible]undant, and at the beginning of the period under review there were no major [illegible]gation works in operation in Upper Burma. During the decade three productive [illegible]ks were opened, the Mandalay Canal in 1903, the Shwebo Canal in 1906, and [illegible] Mon Canals in 1911; and two further productive works—the Yeu Canal and the [illegible]wante Canal Improvement Scheme—were under construction.

The areas shown in the table as "benefited" under the head "Minor Works" represent areas of cultivation on lands in the Irrawaddy delta reclaimed by the construction of river-flood embankments. A considerable area (over 259,000 acres in 1911–12) is irrigated from minor works for which full accounts are not kept, and embankment works of the same class protect 193,000 acres.

The value of the crops irrigated from major canals during 1911–12 was over £500,000, while those irrigated from minor works were valued at nearly £700,000. The estimated value of the crops grown on lands protected by embankments was £2,167,000.

Madras.—

	Productive Works.		Protective Works.		Minor Works.	
	1901–02.	1911–12.	1901–02.	1911–12.	1901–02.	1911–12.
Capital outlay to end of year (£)	4,595,000	5,568,000	323,000	386,000	669,000	639,000
Mileage in operation - - -	7,800	11,980	210	231	2,548	1,083
Area irrigated (*acres*) - -	2,896,000	3,485,000	85,000	99,000	568,000	352,000
Percentage of net revenue on capital outlay - - -	9·55	9·93	·72	1·76	7·0	5·15

The Madras Presidency is distinguished by the variety and extent of its irrigation works, which include a very large number of tanks depending for their supplies on the local rainfall. The most important among the major works are the deltaic systems of the Godavari, Kistna, and Cauvery, which together irrigated 2,712,000 acres in 1911–12. In these deltas the conditions are as favourable for irrigation as in the tracts served by the great perennial canals of the Punjab. The remaining major works are of a wholly different character, as they depend more or less on storage works or are carried out in more difficult country. A number of works were transferred from the "minor" to the "productive" class in 1907. Among the new works commenced during the decade were the Mopad reservoir and the Bhavanasi tank under the head "protective," and the Nagavalli river project and the Divi pumping project, classed as "productive." All were taken in hand in 1905 and 1906. The last-named project, for the irrigation of 50,000 acres in the Divi Island at the mouth of the Kistna by water raised from the river by means of powerful steam pumping machinery, was regarded as being of the nature of an experiment. The works were brought into operation for the time in 1907–8; in 1911–12 over 24,000 acres were irrigated. The total area show the table represents not much more than half of the total irrigation from State wo in Madras; there are a great number of minor works for which neither capital r revenue accounts are kept. The restoration of these small works has been steadi pursued since 1883 in connection with what is known as the Tank Restoration Schem Of the total area of cultivation to be brought under review, estimated at 2¼ milli acres, about 35 per cent. had been investigated at the beginning of the decade, a estimates amounting to £460,000 for Government works had been sanctioned. By t end of the decade works supplying 46·6 per cent. of the total area had been inves gated, and the total estimates for Government works amounted to £763,000.

Apart from the irrigation works, there are in Madras over 300 miles of can intended for navigation only, including the Buckingham Canal, a salt-water ca running for 262 miles along the east coast. The receipts of the navigation canals not cover working expenses.

Mention may perhaps be made of the Kistna reservoir project, now under sideration, which contemplates the construction of a dam costing over £5,000 The work if constructed will be the largest of its kind in the world, exceedin magnitude the Assuan dam on the Nile.

Bombay (excluding Sind).—

	Productive Works.		Protective Works.		Minor Works.	
	1901–02.	1911–12.	1901–02.	1911–12.	1901–02.	1911–
Capital outlay to end of year (£)	737,000	863,000	579,000	1,381,000	541,000	580,000
Mileage in operation - - -	434	521	341	511	465	450
Area irrigated (*acres*) - -	27,000	35,000	59,000	72,000	42,000	43,000
Percentage of net revenue on capital outlay - - -	1·87	3·42	2·10	1·76	·55	1·15

(Irrigation.)

In Bombay proper the natural conditions are unfavourable for the construction of large irrigation works, and the works in existence are not, from the financial point of view, very successful, though the productive works have shown improved results in recent years. The most important are the Nira and Mutha Canals, which in 1911–12 irrigated between them 55,000 acres. In addition to the areas shown in the table, a further area of about 150,000 acres was irrigated throughout the decade by over 1,300 minor works—small tanks and *bandharas*—for which revenue accounts only are kept. In view of the liability of the Deccan districts to severe famine, comprehensive surveys were carried out during the decade with a view to estimating the possibilities of protective works there. Two important projects were sanctioned in 1906–07—the Godavari Canal, estimated to cost £640,000 and to irrigate 64,060 acres in the Nasik and Ahmednagar districts; and the Pravara Canal, to cost £576,000 and to irrigate 49,000 acres. The first 54 miles of the Godavari Right Bank Canal were open during 1911–12, and 16,000 acres were irrigated. Shortly after the end of the period under review, sanction was given to the construction, at an estimated cost of £1,700,000, of what is the most important project of the protective class so far undertaken in India—the Nira Right Bank Canal, designed to protect an area of 190,000 acres in the Sholapur district, which has the reputation of being one of the most liable to famine in the whole of India.

Sind.—

	Productive Works.		Minor Works.	
	1901–02.	1911–12.	1901–02.	1911–12.
Capital outlay to end of year (£) - - -	1,479,000	1,774,000	267,000	322,000
Mileage in operation - - - - -	1,738	2,547	1,851	1,912
Area irrigated (*acres*) - - - - -	969,000	1,042,000	847,000	820,000
Percentage of net revenue on capital outlay -	5·73	4·18	22·09	24·18

Agriculture in Sind, an almost rainless tract, is wholly dependent on irrigation, which here, as in parts of the Punjab, has completely altered the face of the country. The works consist almost entirely of inundation canals from the Indus. Those classed as "minor" include some very large canals. One of them, the Fuleli Canal, although the capital outlay upon it up to the end of 1911–12 was only £132,000, had in that year 1,013 miles of main canal and irrigated 383,500 acres. The Ghar Canal, another large minor work, with a total length of 296 miles, showed a return of 100·88 per cent. on the capital outlay (£38,000). The table in the margin gives the total area irrigated in each year by irrigation works in Sind. The figures include the areas irrigated by minor works for which only revenue accounts are kept and "agricultural works," which account in Sind for, roughly speaking, about a third of the irrigation. The irrigated area fluctuates greatly according to the state of the river. The inundation of 1911 was favourable for Lower Sind; but in Upper Sind the season was unsatisfactory.

	Acres.
1901–02 -	3,077,000
1902–03 -	2,872,000
1903–04 -	3,473,000
1904–05 -	3,243,000
1905–06 -	3,693,000
1906–07 -	3,878,000
1907–08 -	3,053,000
1908–09 -	3,703,000
1909–10 -	3,304,000
1910–11 -	3,505,000
1911–12 -	3,037,000

Of the works completed during the period under review, the Dad and Nasrat Canals were the most important. The former was in operation to some extent in 1902; both were completed in 1906–07.

The question of converting the network of inundation canals in Sind into perennial canals by means of weirs across the Indus has been under consideration repeatedly during the last fifty years. As a result of investigations undertaken on the recommendation of the Irrigation Commission, a scheme has now been drawn up for the construction, at a cost of over £5,000,000, of a barrage at Sukkur with a canal on the left bank (the Rohri Canal) which would be the largest irrigating channel in India. The project is under consideration.

(Irrigation.)

Minor Provinces.—

	British Baluchistan.		Ajmer-Merwara.	
	1901–02.	1911–12.	1901–02.	1911–12.
Capital outlay to end of year (£) - - - -	110,000	192,000	200,000	230,000
Mileage in operation - - - - - -	45	87	—	—
Area irrigated (*acres*) - - - - -	7,700	4,200	24,000	19,000
Percentage of net revenue on capital outlay -	1·45	·55	3·01	·46

In the remaining provinces there are minor works only. Two small works, the Shebo Canal and the Khushdil Khan Reservoir, constructed by the British Government in the Quetta-Pishin District of Baluchistan were in operation throughout the decade and irrigated between them from 2,000 to 9,000 acres, according to the season. A still smaller project, the Anambar Flood Channel, was in working order from 1903, but no irrigation was done, owing to the failure of the expected Hazara colonists to come forward and take up land. Permanent supplies of water are so fully utilised that there is little scope for new State irrigation works. The distinctive private irrigation works of Baluchistan are the *Karez*, or underground tunnels which tap the subsoil supply of water on high ground and lead it on to the surface of lower country.

The irrigation works in Ajmer-Merwara (apart from wells) consist entirely of tanks, which have been constructed in almost every available catchment basin. Every effort has thus been made to utilise to the utmost the scanty rainfall, and there is little room for the extension of irrigation. The area irrigated fluctuates greatly, according to the character of the season. During the period under review it varied between 11,000 and 41,000 acres.

Irrigation works are not required in Coorg, except in a narrow strip on the eastern border, where the rains occasionally fail and a few petty works have been constructed.

Buildings and Roads.

Under this head, as has already been mentioned, is classed all work undertaken by the Department of Public Works that does not fall within either of the sections already dealt with. The various works coming within this class do not lend themselves to comprehensive treatment; some details have been given in previous annual reports of the more important items. The table below shows the total receipts and expenditure, Imperial and Provincial, under the head Civil Works, for each year, as stated in the accounts of the Government of India, with details by provinces for 1911–12:—

	Receipts.		Expenditure.	
	Imperial.*	Provincial.†	Imperial.*	Provincial.†
	£	£	£	£
1902–03	47,812	154,092	587,632	2,347,103
1903–04	44,571	209,490	668,599	2,668,735
1904–05	45,484	176,927	770,101	2,697,195
1905–06	45,467	169,465	793,243	3,020,385
1906–07	51,565	185,856	718,897	3,262,611
1907–08	21,313	198,484	797,501	3,478,623
1908–09	28,129	259,809	780,245	3,715,680
1909–10	34,001	234,785	652,704	3,483,203
1910–11	52,685	241,148	714,166	3,822,501
1911–12	70,256	256,668	833,953	4,619,259

	Receipts, 1911–12.	Expenditure, 1911–12.
	£	£
India, General - - -	34,033	151,869
Central Provinces - -	47,120	436,774
Burma - - - -	20,662	689,552
Eastern Bengal and Assam -	23,414	461,696
Bengal - - - -	48,221	757,416
United Provinces - -	30,764	519,831
Punjab - - - -	46,226	467,234
N.W. Frontier Province -	9,147	155,729
Madras - - - -	18,522	762,270
Bombay - - - -	48,814	966,050
Charges in England - -	—	84,793
Total - - -	326,924	5,453,212

* Including receipts and expenditure in England, and receipts and expenditure by Civil Officers from Imperial funds.
† Including receipts and expenditure by civil department.

(Buildings and Roads.)

Some account of the expenditure on roads and buildings of local boards, into whose hands the extension of local government in India has thrown a large proportion of the smaller public works, has been given in the chapter on Local Self-Government.

Rents of buildings make the largest contribution to the Imperial and Provincial receipts shown in the table, tolls and canal and ferry receipts adding substantial amounts in some provinces. "New civil buildings" takes the first place among the heads of expenditure, followed by "Repairs to communications," "New communications," and "Repairs to civil buildings." The totals under the different heads of expenditure in 1911–12 are shown in the margin.

	Imperial.	Provincial.
	£	£
Civil Buildings :		
New works - - - -	304,648	1,216,839
Repairs - - - - -	108,447	282,956
Communications :		
New works - - - -	45,528	280,191
Repairs - - - - -	92,119	815,884
Miscellaneous Public Improvements :		
New works - - - -	14,645	467,945
Repairs - - - - -	2,914	130,293
Establishment - - - -	117,393	591,140
Tools and plant - - - -	10,435	54,274
Other expenditure - - - -	48,483	799,365
Suspense - - - - -	13,856	*—19,622*
Total - - - -	833,953*	4,619,259

* Including outlay in England, £75,486, on account of leave allowances, passages, &c.

(Army and Marine.)

CHAPTER XX.

ARMY AND MARINE.

Administration.—Subject to the control of the Crown exercised by the Secretary of State for India, the supreme authority over the army in India is vested in the Governor-General in Council. The important changes made in the system of military administration in India during the decade have been fully dealt with in other papers laid before Parliament,* and it will suffice here to recall the main facts. Up to 1906 the Governor-General's Council included, as one of its ordinary members, a military officer, who, subject to the general control of the Governor-General in Council, was in direct charge of the administrative and financial business of the army, and dealt with the proposals of the Commander-in-Chief, who was responsible for discipline and executive control. The Military member presided over what was known as the Military Department: namely, the Military Secretariat of the Government of India, which had under it various executive departments. The Commander-in-Chief was also included in the Council, as an Extraordinary member, ranking next after the Viceroy. In March 1906 the business of the Government of India connected with military affairs was divided, in accordance with a decision arrived at in the preceding year, between two new departments, which took the place of the Military Department. The Department of Military Supply, which, like the old Military Department, was placed in charge of an ordinary member of Council, dealt with matters connected with important army contracts, and the supply and registration of transport animals, and controlled the working of the departments of Ordnance, Remounts, Military Works, Army Clothing, and the Royal Indian Marine, as well as the military work of the Indian Medical Service. To the Army Department, which was placed in charge of the Commander-in-Chief, was allotted all other business connected with the army, and also business connected with cantonments and volunteers. The Military Accounts Department, formerly under the Military Department, became a branch of the Finance Department. With the object of relieving the Commander-in-Chief of some portion of the burden falling upon him under the new arrangements, an officer of superior rank was appointed to the Staff of the Army with the designation of Chief of the Staff. In April 1909 the Department of Military Supply was abolished, and the process of transferring to the direct control of Army Headquarters the auxiliary services of the army, such as ordnance, transport, remounts, &c., was completed. The work of the Military Supply Department remaining to the Government of India was taken over by the Army Department, and the direction of the whole military administration, subject to the supreme control of the Government of India, passed to the Commander-in-Chief as member of the Governor-General's Council in charge of the Army Department.

Expenditure on Military Services.—The figures of expenditure, which bring out in a general way the chief features of the decade, may conveniently be noticed first. The table below shows in summary form the expenditure year by year on all military services :—

	Gross.					Net.
	Army.	Military Works.	Special Defences.	Marine.	Total.	All Military Heads.
	£	£	£	£	£	£
1902–03	17,346,392	1,096,669	—	409,222	18,852,283	17,634,613
1903–04	17,865,208	1,034,654	27,054	613,751	19,540,667	18,140,823
1904–05	20,175,694	981,599	128,295	620,789	21,906,377	20,696,193
1905–06	19,267,130	1,094,905	146,306	551,070	21,059,411	19,676,639
1906–07	19,657,845	1,127,515	138,358	663,385	21,587,103	20,170,360
1907–08	18,647,533	1,166,943	116,287	485,024	20,415,787	19,248,354
1908–09	19,177,266	967,362	29,044	476,957	20,650,629	19,602,988
1909–10	18,901,181	858,342	28,604	461,157	20,249,284	19,112,323
1910–11	19,131,780	900,437	7,987	445,867	20,486,071	19,265,042
1911–12	19,536,546	909,657	4,706	450,728	20,901,637	19,558,580

* Cd. 2572, 2615, 2718 of 1905 ; 2842 of 1906 ; 4574 of 1909.

Before considering the figures in detail, reference may be made to one class of expenditure that largely affected the totals in the first two columns of the table, viz., "special military expenditure," this term being taken to cover outlay on measures designed for the improvement of the condition, equipment, or preparedness of the military forces, as distinguished from the amount required for the normal maintenance of the army. Among these measures those associated with the name of Lord Kitchener take a prominent place. For some years prior to 1904–05 a large amount of expenditure had been incurred on "special" measures, but the funds available fluctuated greatly from year to year, and the objects to which they were devoted were not selected on any settled plan. In 1904 Lord Kitchener, then Commander-in-Chief in India, put forward a definite programme for the reorganisation and redistribution of the army, in order to ensure the economical completion of which it was decided to provide for five years an annual grant of £2,000,000 (subsequently increased, by the inclusion of military works expenditure, to £2,167,000) for "special military expenditure." The amount of the grant was reduced in 1907, in view of the improvement in the political situation, and the original scheme was modified in several respects. In 1909, when an increase in military charges unconnected with reorganisation, coupled with a decline in general revenues, made it necessary to reduce "special" military expenditure, it was decided to abolish the special grant, and practically to revert to the system in force prior to 1904–05, making the grant for "special" expenditure dependent on the urgency of the need, the claims of other branches of the administration, and the condition of the revenue. The grant made in 1904 was intended to provide, not only for the Commander-in-Chief's programme, but also for all other special expenditure (excepting petty items), and to cover also the recurring cost of special measures carried out from 1904–05 onwards. The expenditure from the special grant in the five years 1904–09 was about £8,227,000. Less than half of this was spent on measures included in Lord Kitchener's original programme, the balance being incurred on other measures such as constantly become necessary in a modern army. The allotments made for special military expenditure in the five years ending 1903–04 had aggregated £5,951,000, and these did not include any provision for recurring expenditure on measures previously carried out. Taking this last fact into account, the allotments for special expenditure in the earlier period were only £1,048,000 less than the amount spent on similar objects in the five years during which the Commander-in-Chief's programme was in progress. The total outlay on "special" or "schedule" measures (which, as now defined, are measures costing more than £3,300) in the last three years of the decade, excluding recurring expenditure, was approximately £1,400,000.

Army Services.

Expenditure.—The details of the army charges, which are the most important of the charges grouped together in the table above, are shown in net form on the next page.

Among the chief factors affecting the totals, apart from the expenditure on "special" measures referred to above, were the increases of pay granted to the European troops in 1902–04, and to the Indian Army in 1909, and the increased payment to the War Office from 1908. It may be noticed that in the first two years of the decade there were savings of over £500,000 and nearly £250,000 (which were to a large extent utilised for "special" expenditure) by reason of the absence of troops on service under the Imperial Government in South Africa, China, and Somaliland. In 1911–12, on the other hand, there were unusually heavy charges for special services. Expenditure connected with the Royal Visit and the Delhi Durbar amounted (including the bonus of pay) to about £372,000, while the Abor Expedition cost some £124,000, and the arms traffic operations in the Persian Gulf about £119,000.

Payments to the War Office.—One of the most important items among the army charges in England is the payment made to the Home Government to cover the cost of recruiting and training, and of other services connected with the maintenance of the British establishment in India. Under the arrangements in force at the beginning of the decade, which dated from 1890, the sum payable was calculated on an all-round "capitation rate" of £7 10*s.* for each officer and man on the establishment of the British force in India. In 1908, when, in accordance with the recommendation of the Commission on Indian Expenditure, a revision of the existing arrangements was undertaken, it was agreed that the payment to the War Office should be increased by

(Army Services.)

Figures in Thousands, omitting 000.

——	1902-03.	1903 04.	1904-05.	1905-06.	1906-07.	1907-08.	1908 09.	1909-10.	1910 11.	1911-12.
Net Army Charges in India.	£	£	£	£	£	£	£	£	£	£
Effective Services :—										
Army and Garrison and Administrative Staff.	525	537	545	559	574	576	591	616	639	656
Regimental Pay, Allowances, and Charges.	5,502	5,899	6,538	6,797	7,566	7,592	7,693	8,181	8,241	8,298
Supply and Transport* - -	2,503	2,526	2,541	2 691	1,984	1,884	2,046	1,962	1,902	1,827
Medical Establishment, Supplies, and Services.	476	561	561	559	422	418	395	368	381	371
Ordnance Establishments, Stores, and Camp Equipage.	515	600	681	700	666	715	668	568	478	418
Other Effective Services -	1,225	1,514	1,639	1,081	1,256	1,181	1,228	937	1,087	1,381
Compensation for dearness of food and forage.	*223*	*270*	*178*	*277*	343	421	574	418	322	326
Total Effective Services	10,745	11,636	12,506	12,387	12,811	12,787	13,195	13,052	13,049	13,277
Non-effective Charges - -	578	579	582	593	582	575	607	609	622	616
Total, India† - -	11,324	12,215	13,499	13,438	13,394	13,362	13,802	13,661	13,671	13,893
Army Charges in England.										
Effective Services :—										
Charges :										
Payments to War Office for British Forces in India.	852	627	645	566	654	631	901	916	935	914
Furlough Allowances - -	363	402	394	422	458	482	498	499	508	499
Indian Troop Service and Passage of Officers.	367	371	383	321	367	347	333	281	243	279
Miscellaneous - - - -	53	45	53	44	41	107	47	30	144	105
Stores - - - - -	1,291	1,174	1,472	714	1,573	651	605	486	506	642
Total - - - - -	2,927	2,619	2,946	2,067	3,093	2,218	2,385	2,212	2,336	2,439
Receipts :										
Contribution of Imperial Government towards Sea Transport Charges.	130	130	130	130	130	130	130	130	130	130
Contribution of Imperial Government towards Military Charges for Aden.	100	100	100	100	100	100	100	100	100	100
Payment by Imperial Government (on capitation basis) for Indian Native Regiments serving in the Colonies.	—	—	—	175	95	103	46	124	135	140
Transfer and Sale of Stores, Recoveries, &c.	104	173	97	85	117	43	38	31	23	75
Total - - - -	334	403	327	490	442	376	314	385	388	445
Net Charge for Effective Services	2,593	2,216	2,619	1,576	2,651	1,842	2,071	1,827	1,949	1,995
Non-effective Charges (net) -	2,305	2,345	2,411	2,348	2,396	2,421	2,441	2,435	2,453	2,469
Total, England† - -	4,898	4,561	5,716	4,639	5,047	4,263	4,512	4,262	4,402	4,464
Grand Total - -	16,221	16,776	19,215	18,077	18,440	17,625	18,314	17,923	18,073	18,357

* Included, up to 1905-06, charges for compensation for dearness of food and forage shown separately in *italics*.

† Including in 1904-05 £411,133 in India and £686,366 in England, and in 1905-06 £458,498 in India and £715,567 in England under the head "Reorganisation," subsequently merged in "Effective Services."

Note.—Owing to changes in the detailed arrangements of the accounts, figures for 1905-06 and earlier years are not altogether comparable with those for later years.

£300,000 a year from the 1st May of that year. The chief grounds for the increase were that the training period on which the charge had hitherto been calculated was inadequate, and that there had been an increase in the emoluments of young soldiers, and in the number of drafts and reliefs annually sent to India. Effect was given to the agreement by increasing the "capitation rate" to £11 8*s*.

Strength of the Army.—The sanctioned establishment of the army in India on the 1st April 1912 included 9 regiments of British cavalry, 52 battalions of British infantry, 39 regiments of Indian cavalry (excluding attached squadrons and body guards), 137 regiments of Indian infantry, 11 batteries R.H.A., with 9 ammunition columns, 45 batteries R.F.A., with 12 ammunition columns, 6 heavy batteries and 21 companies R.G.A., 8 British and 13 Indian mountain batteries, 20 service companies and 2 railway companies of sappers and miners, and 5 signal companies. As compared with the establishment on the 1st April 1902, the figures show an increase of 3 regiments of Indian cavalry, 5 regiments of Indian infantry, 3 batteries R.F.A., 2 heavy batteries R.G.A., 2 Indian mountain batteries, 3 service and 2 railway

companies of sappers and miners, and 5 signal companies. No artillery ammunition columns were shown in the returns ten years ago, their formation having been part of a scheme undertaken at the beginning of the decade for improving the organisation of horse and field artillery. The most notable change in the sanctioned establishment was the addition of 3 regiments of cavalry and 6 of infantry in 1903 by the absorption into the regular army of the Hyderabad contingent.

The table below shows the total sanctioned establishment of the military forces in 1902 and 1912, with the actual strength also in 1912. To the auxiliary forces included in the table might be added the Military Police (total strength about 21,500), and the Border Military Police, Militia and Levies (total strength about

	Sanctioned Establishment, 1st April 1902.	Sanctioned Establishment, 1st April 1912.	Actual Strength, 1st April 1912.
Troops under the orders of the Commander-in-Chief in India :			
British Officers	5,058	6,186	6,135
British Warrant and Non-Commissioned Officers and Men	71,070	73,390	73,472
Indian Officers, N.C.O.'s and Men	148,049	159,940	151,038
Troops not under the orders of the Commander-in-Chief* :			
British Officers	136	7	7
Indian Officers, N.C.O.'s and Men	7,885	21,059	22,089
Reserves	24,842	35,736	38,811

Volunteers :	1st April 1902.	1st April 1912.
Enrolled strength	31,397	38,948
Efficients	29,479	38,247

* Including in 1902 the Hyderabad contingent, and in 1912 the Imperial Service Troops.

13,500). The difference between the sanctioned establishment and the actual strength in India at the end of the decade was mainly due to the absence of a number of units on service out of India. On the 1st April 1912 four battalions of Indian infantry and a mountain battery were stationed at Hong Kong, and two battalions in Ceylon and at Singapore respectively. One battalion was employed in North China, and one in the Persian Gulf. A regiment of cavalry was also absent in Southern Persia, whither it was sent during the year for the purpose of strengthening the consular guards. The employment of five Indian infantry regiments on colonial garrison duty under the Imperial Government is a normal arrangement, five new regiments having been raised for this purpose in 1900–01 under an agreement with the War Office.

The increase in the number of British officers was an important feature of the decade. An addition of one British officer was made to the establishments of 64 Indian regiments in 1902–03, and 110 more officers were added in the following year so as to give all Punjab regiments an establishment of 13 officers, and all other regiments one of 12. A further addition of 350 officers to the Indian Army was made in the years 1906–08.

Reserves.—The Indian Army Reserve dates from 1886. Under existing arrangements, it consists of men with not less than three years' colour service. Men passing into the Reserve still belong to their respective regiments, and come up for two months' training once in two years. In 1904, when the strength of the Reserve was about 24,500 men, it was decided to raise it gradually to 50,000 men, reducing the reserve pay from Rs. 3 to Rs. 2 a month, and also to form an Indian cavalry reserve by extending the system to *silladar* cavalry regiments. Reservists obtain a pension after 25 years' total service. There is a small body of reserve officers.

Volunteers.—The Volunteers of India may be classed under the head of British forces. They include foot and mounted rifle regiments, light horse, and garrison artillery, with some electrical engineer and other specialised companies. Their rôle is the defence of ports, railways, cantonments, and civil stations. A number of rifle corps are recruited from railway employés, forming valuable bodies for the defence of their respective railways.

The *Imperial Service Troops*, *Military Police*, and some of the most important sections of the *Frontier Militia* (which includes the Khyber Rifles, Zhob, Kurram, and Northern and Southern Waziristan Militia, Chitral Scouts, and the various district levies of Baluchistan) are referred to elsewhere. (*See* pages 16, 18, 22, 23, 93.)

(Army Services.)

Reorganisation, Redistribution, and Rearmament.—The measures of reorganisation during the decade were numerous, and only the most important changes can be referred to here. The first place must be given to the scheme of reorganisation and redistribution inaugurated by Lord Kitchener in 1904. After the abolition in 1895 of the Presidency Army system, the army of India was divided into four large commands, designated, in accordance with their local distribution, the Punjab, Bengal, Bombay and Madras commands; the Burma district, separated from the Madras command in 1903-04, became practically a fifth command. These commands were subdivided into military districts, but they were not in any way organised army corps, nor were the troops in the military districts organised in divisions and brigades. The leading principle of Lord Kitchener's scheme, which had in view especially the defence of the north-west frontier, was that the army in peace should be organised and trained in units of command similar to those in which it would take the field. The adoption of this principle involved the abandonment of a number of small military stations and the concentration of the bulk of the troops in large cantonments. They were distributed in three Army Corps commands—Northern, Western, and Eastern—containing eight divisional commands, while two divisions, Secunderabad (representing the old Madras command) and Burma, were not included in any of the commands, and were directly under the Commander-in-Chief. Each divisional command (excluding Burma) would, in the event of general mobilization, supply a full division to take the field. Below the divisional organisation comes that of brigades. The provision of funds for, and the progress of expenditure on, this scheme have been referred to above.

Further changes were made in June 1907. From this date the Northern, Western and Eastern commands ceased to exist, and the army in India was divided into two portions, a Northern and a Southern Army, each under the command of a general officer. This is the arrangement now existing. The Northern Army consists of five divisions and three independent frontier brigades, and the Southern Army of five divisions (of which Burma is one) and the Aden Brigade. The administrative work previously performed at the headquarters of the commands was transferred in 907 to general officers commanding divisions and independent brigades, the duty assigned to the general officers commanding the two armies being that of ensuring general uniformity in training and discipline in the divisions and brigades under their respective commands, and of maintaining the efficiency of all units.

Other measures must be dealt with very briefly. Questions of reorganisation and rearmament were already prominent at the beginning of the decade, when, in view of the lessons of the South African War, much had already been done in the direction of making good recognised deficiencies in India's military position, especially in the matters of armament, material, improvement in supply and transport organisation, and accessory departments.

Among the measures taken in 1902-03 was one of regimental reorganisation in the Madras army. Experience having shown that suitable recruits to maintain the 25 Madras infantry battalions could not be obtained from within the limits of that command, it was decided to reconstitute 10 battalions from the fighting races of Northern India. Ten battalions and 3 cavalry regiments were reorganised accordingly in 1902-03 and 1903-04. A number of regiments in other commands were also reorganised. In the same years 3 howitzer batteries were added to the army, a corps of Indian garrison artillery was formed for frontier posts, the brigade division system was introduced for horse and field artillery, and ammunition columns were formed for the field army, 12 corps of mule transport were organised, the scattered ambulance establishment was organised into an Army Bearer Corps, the system of grass and dairy farms was expanded, and the control of horse and mule-breeding operations in certain selected districts was transferred from the Civil Veterinary Department to the Army Remount Department. In 1904 the old numbering of regiments on a presidency basis was abolished, and the regiments of the Indian Army were renumbered consecutively throughout. An important step also taken in this year was the initiation of a scheme for an Indian staff college. It was considered essential that candidates for staff employ in India should be more highly trained, and that the means of obtaining the desired training should be provided in India. An Indian staff college was accordingly established in 1905, and instruction was begun at Deolali, pending the completion of the existing buildings at Quetta. Between 1904 and 1909 the

strength of the army was increased by 8 ammunition columns and 2 batteries of Indian Mountain Artillery, while the R.H.A. and R.F.A. establishments were considerably augmented in consequence of the introduction of new quick-firing guns, the mountain and howitzer artillery units were reorganised and placed on a more efficient footing, several battalions of Gurkhas were raised in replacement of other classes of battalions, and, as already mentioned, the Indian Army Reserve was substantially augmented and 350 British officers were added to the Indian Army. Transport was strengthened, a reserve of cavalry horses was provided, the medical and veterinary equipment was much improved, and additional accommodation was provided at a number of stations to provide for the withdrawal of troops from outlying stations and their concentration at strategical centres. In 1909–10 a cavalry school of instruction was established, and the process was completed by which the army in India was brought under the system of staff organisation recently introduced in England and in other parts of the Empire, the staff being divided into a general staff responsible for organisation and training, and an administrative staff carrying on the current business of army administration.

In subsequent years the organisation of the new artillery columns has been completed, the arrangements for financial control have been improved by separating accounting and audit duties, the reserve of artillery horses has been reconstituted, and further progress has been made in providing new accommodation in connection with the redistribution scheme.

Mention may be made here of the abolition of the designation "Indian Staff Corps," as applied to the general body of British officers in the permanent service of the Government of India, with effect from the 1st January 1903. The officers of the corps have since been known more appropriately as officers of the Indian Army.

It is impossible, within the limits of this Statement, to deal in detail with the subject of rearmament. The rearmament of the British infantry with the Lee-Metford rifle having been completed in 1899, and the cavalry having been armed with the Lee-Enfield carbine in 1897, the rearmament of the field army was completed in the first year of the decade, when the new rifle was issued to the Indian Army. The rearmament of the volunteers and reservists followed. In 1902–03 and the following year also 130 machine guns were added. The realisation of a large surplus in 1904 made it possible to provide £700,000 in 1904–05 for new rifles and guns—£500,000 being for new pattern guns. During the next few years further sums were provided and the Royal Horse and Field Artillery were rearmed with 13 and 18 pdr. quick-firing guns, while the stocks of artillery and small-arms ammunition, maxim guns, rifles, and war equipment generally were considerably augmented. At the end of the decade new guns, short rifles for the regular army, and new pattern bayonets and swords for the British troops were under provision.

In this connection, mention may be made of the great development of the manufacturing establishments of the Ordnance Department in India. New factories were already in process of erection at the beginning of the decade, in accordance with the policy of making India as far as possible self-supporting as regards warlike stores. The Cordite Factory at Wellington began work in 1904, and the Rifle Factory and Gun and Shell Factory at Ishapur, the Central Gun Carriage Factory at Jubbulpore, and the Gun Factory at Cossipore were all at work within the next two or three years.

Improvements in Pay and Conditions.—The decade began with an increase of the pay of British troops, due to the adoption in India of the proposals of the Home Government for an increase of 2*d.* a day from the 1st April 1902. This involved an additional charge on Indian revenues of some £225,000 a year. In April 1904 a further increase of from 4*d.* to 7*d.* a day was given in the form of service pay. The whole of the service pay issued in India was, in accordance with the decision of the Lord Chief Justice, acting as arbitrator between the Imperial and Indian Governments, borne by the latter, the extra charge being thus raised to about £700,000 a year. From the 1st January 1909, in accordance with the intention announced in the Proclamation of the King-Emperor on the fiftieth anniversary of the transfer of government to the Crown, a general increase of pay for all ranks was granted to the Indian Army, and arrangements were made for the free supply of fuel by Government, at a cost of £427,000 a year. The increase was Rs. 3 a month for non-commissioned officers and men of the *silladar* cavalry, and Rs. 2 for other troops. Other measures that may be noticed were the raising of the kit-money granted on enlistment and the introduction of

a boot allowance, the grant of free grass to *silladar* cavalry when on the march or at manœuvres, and of free passages by rail (within certain limits) for men called home on urgent private affairs—all introduced in 1906; the revision and improvement of the pension rules of the native army, and the abolition of the punishment of flogging in time of peace, except for offences for which that punishment is permissible in civil life, in 1907–08; and a revision of the rates of pay of captains and subalterns of the Indian Army, and of regimental salaries, involving a considerable addition to the emoluments of the junior grades, in 1909. Since 1910 considerable progress has been made with the improvement of the accommodation for the native troops. It had become obvious that this improvement was a matter of urgency in many cases, and with the persistent rise in prices and wages comfortable and durable buildings could no longer be constructed without a considerable increase of expenditure. In the new lines, a sound type of construction has been adopted, and the work has been entrusted to the Military Works Services instead of to regimental agency. Finally, mention may be made of the bonus of half a month's pay granted to all non-commissioned officers and men and reservists of both the British and Indian Armies, and to the equivalent ranks of the Royal Indian Marine, at the Coronation Durbar in 1911, at a cost of about £166,000. On the occasion of the Coronation Durbar of 1902, a money grant, to be spent at the discretion of officers commanding, was made to all British and native corps.

Military Operations.—The military operations of the decade may be dealt with briefly.

In November 1902 a punitive expedition was sent against certain sections of the Darwesh Khel Waziris. The force employed was nearly 3,800 strong, regular troops and militia. The work was successfully carried out, but not without some sharp fighting. Our casualties were five killed or died of wounds (including two British officers) and 15 wounded (including three British officers).

In 1903 it was found necessary to employ a military force for the protection of the Aden Boundary Commission. For more than a year troops (averaging about 2,000 combatants) were on field service in the Hinterland under exceptionally trying conditions, due to the inhospitable nature of the country and its torrid climate. Although there was not a great amount of fighting, the troops were on several occasions engaged with the tribesmen. The casualties (excluding those among followers) amounted to 10 killed and 21 wounded.

The operations connected with the Tibet Mission were on a larger scale. Details were given in the papers laid before Parliament at the time. The military escort numbered about 3,000 fighting men. Active hostilities were commenced by the Tibetans on the 31st March 1904, and there was sharp fighting round Gyantse in June. Lhasa was reached early in August, and by November most of the troops had returned to India. In all, the escort had 16 engagements and skirmishes; the war casualties were 37 killed and 165 wounded, in addition to which there were 411 deaths and 671 invalidings, mostly due to the extraordinary climatic conditions under which the campaign was carried on. The physical difficulties encountered were very great. The country, on the whole, was singularly sterile, and the operations were carried out at an average altitude of 14,000 feet, the troops on some occasions having to fight at altitudes of from 17,000 to 18,000 feet. Gales and snow-storms were frequent, 50 degrees of frost were not unusual in the winter, and even in July the weather was very inclement. The discipline and conduct of the troops were excellent.

In the spring of 1908 brief punitive expeditions against the Zakka Khel and the Mohmands, further reference to which is made on page 22, were successfully carried through.

The operations against the Abors in 1911–12 were, like those in Tibet, carried out under exceptional physical difficulties. The difficulties of transport and the climatic conditions involved considerable hardships. The strength of the force was about 2,800. The total casualties in action (including followers) were five killed and six wounded. There were seven deaths from disease among the troops, and 47 among public followers. The energy and good feeling displayed by all ranks and the comparative freedom from disease, due to good sanitary arrangements, were very satisfactory features.

Since January 1910 a combined military and naval force has been operating in the Persian Gulf with a view to the suppression of the illicit traffic in arms.

The **Health of the Troops** is dealt with in Chapter IX.

Inquiry into Military Requirements and Expenditure.—Shortly before the end of the period under review, a committee was appointed, with Field-Marshal Sir William (now Lord) Nicholson as chairman, with the following terms of reference:—First, to carry out a comprehensive survey of the various circumstances requiring the use of military force which may arise out of the external and internal situation of India under the conditions which now exist or may probably arise during the next few years. Secondly, to consider and report on the numbers and constitution of the armed force which should be maintained in India to meet these obligations. Thirdly, to consider and report whether any, and, if so, what, measures for the reduction of military expenditure are compatible with the efficient maintenance of that force.

An examination of marine expenditure by another committee was completed early in 1912.

Military Works and Special Defences.

Since 1899, when the Military Works Department, as then constituted, was abolished, military works have been carried out by officers of the Royal Engineers in India as part and parcel of the army organisation. The nature of the work undertaken during the decade will be sufficiently indicated by the following statement of expenditure:—

Expenditure on Military Works.

	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
	£	£	£	£	£	£	£	£	£	£
New Buildings:—										
For Accommodation of Troops	239,141	245,909	170,429	145,802	296,125	358,547	235,333	191,856	210,504	222,549
General Cantonment Works	66,552	65,547	58,517	61,915	38,782	38,395	38,018	40,862	37,752	30,283
Defence Works	45,244	9,054	3,361	4,092	4,492	18,379	7,847	2,582	2,333	14,105
Other Works	199,842	219,096	251,792	220,163	231,230	149,327	81,855	46,197	57,976	62,749
Repairs:—										
For Accommodation of Troops	79,528	81,980	82,575	76,294	76,221	89,203	95,712	100,585	110,605	102,984
General Cantonment Works	57,199	60,833	61,243	70,921	71,146	117,895	113,237	114,496	109,388	120,169
Defence Works	17,757	12,886	10,129	10,839	12,261	8,885	10,201	10,520	9,418	10,212
Other Works	88,350	97,883	91,812	81,740	88,769	79,903	85,181	75,387	83,243	72,801
Barrack Furniture	65,980	59,404	62,772	59,469	59,276	63,744	66,980	59,817	61,203	60,060
Establishment	187,535	185,701	179,614	189,840	235,033	232,417	227,107	216,684	214,019	213,172
Reorganisation*	—	—	2,187	164,541	—	—	—	—	—	—
Total Expenditure (including other charges and outlay on stores in England).	1,096,669	1,034,654	981,599	1,094,905	1,127,515	1,166,943	957,362	858,342	900,437	909,657
Total Receipts	38,301	45,083	45,462	49,306	50,999	57,268	59,254	75,773	70,593	78,791
Net Expenditure	1,058,368	989,571	936,137	1,045,599	1,076,516	1,109,675	908,108	782,569	829,844	830,866

* Special head of accounts discontinued after 1905–06.

The Military Works receipts are mostly under the head "rents of buildings" (military quarters, &c.).

A special defence scheme matured in 1885 was carried to completion towards the end of the decade preceding that under review. Under this scheme about £3,068,400 had been expended up to the end of 1901–02, of which £846,600 was spent on coast defences, £740,000 on frontier defences, and £1,385,000 on armaments. In 1903 it was decided that it was necessary to reorganise the coast defences of the chief ports, and a further programme of special defence works was prepared, expenditure on which began in 1903–04. Up to the end of the decade £626,641 had been expended, of which £268,872 came under the head "armaments," and £306,245 under "special defences." The greater part of the expenditure—£393,874 altogether—had been incurred for defences and armament for Bombay.

Marine Services.

The Indian Navy, which had existed under the East India Company, in one form or another, since its creation under the charters of Charles II. and James II., was abolished in 1862, and the duties that it had performed, in conjunction with H.M. Navy, were taken over for the most part by the latter. The "Bombay Marine," then created was eventually amalgamated with the "Bengal Marine" in 1877 under the title of "H.M. Indian Marine," changed in 1892 to "Royal Indian Marine." Its duties were

(Marine Services.)

to be the local transport of troops and stores, the guarding of convict settlements, the suppression of piracy, marine surveys, and the protection of the ports. The executive control over the defence flotilla of turret ships, torpedo-vessels, and gunboats belonging to the Indian Marine was transferred to the Admiralty in 1901, under an agreement providing for an annual payment to the Imperial Government of £61,600. This flotilla, which had been maintained at Bombay, was abolished at the end of 1902–03. The officers of the Royal Indian Marine are appointed by the Secretary of State, from qualified officers of the mercantile marine. The fleet consisted at the end of the decade of 9 sea-going vessels, 3 inland vessels, 3 flats, a hulk, and numerous smaller steamers and launches; armaments are available for the equipment of the vessels for war and service. The R.I.M.S. "Dufferin," the largest vessel, replaced the "Clive" in 1905: two years later the "Canning" was replaced by the "Northbrook." Some of the smaller vessels were also replaced by new vessels during the decade. There are dockyards under the charge of the department at Bombay and Calcutta. The service has at its head a Director, usually a naval officer, with headquarters at Bombay, and a Deputy-Director at Calcutta. Officers of the Indian Marine are also employed on the Marine Survey and as port officers at the various Indian ports. On the 1st April 1912 the R.I.M. establishment included 104 executive officers, 82 engineer officers, and 65 warrant officers, while the native crews of the vessels (seamen, artificers, and others) numbered altogether about 1,900 men. The Marine Survey included 11 officers.

The trooping between India and England is carried out mainly by hired transports, but Indian Marine vessels are used to some extent. These vessels have also been employed extensively, in recent years, in the transport of troops between Indian and Colonial stations.

Since 1869 India has paid a contribution of varying amount to the Imperial Government in consideration of services performed by the Royal Navy. Under existing arrangements, which date from 1896–7, a subsidy of £100,000 a year is paid for the upkeep of certain ships of the East India Squadron, which may not be employed beyond prescribed limits except with the consent of the Government of India. The chief heads of marine expenditure during the decade are shown below. Charges and receipts in respect of pilotage are no longer brought to account under this head.

Marine Expenditure.

	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
	£	£	£	£	£	£	£	£	£	£
In India :—										
General Supervision and Accounts.	11,568	11,259	11,184	11,530	11,132	11,499	12,568	13,068	9,949	10,263
Marine Survey Establishment	5,457	5,952	5,934	5,279	5,102	5,465	5,667	5,848	5,294	6,139
Dockyards - - - - -	38,192	77,918	91,126	81,585	79,988	50,375	50,652	52,681	52,271	65,388
Salaries and Allowances and Victualling.	64,845	65,528	68,408	73,270	74,257	81,237	79,066	75,989	76,748	75,828
Marine Stores and Coal - -	*- 25,902*	102,584	103,142	79,112	82,881	62,787	64,763	66,100	72,880	60,215
Total, including other charges	134,492	303,794	301,379	273,265	276,596	239,738	244,571	254,934	237,612	250,796
In England :—										
Contribution towards the expenses of His Majesty's Ships employed in the Indian Seas.	105,475	100,023	100,115	100,072	100,066	100,056	100,094	100,169	100,110	100,116
Subsidy to the Admiralty for manning and maintaining Indian Government Defence Vessels.	61,600	—	—	—	—	—	—	—	—	—
Stores - - - - - -	74,894	179,401	189,421	148,021	254,047	111,607	98,643	75,392	73,667	62,375
Total, including other charges	274,730	309,957	319,410	277,805	386,789	245,286	232,386	209,223	208,255	199,932
Grand Total Expenditure -	409,222	613,751	620,789	551,070	663,385	485,024	476,957	461,157	445,867	450,728
Receipts - - - - -	54,379	265,333	203,791	143,770	148,175	87,686	125,448	83,460	91,787	84,900
Net Expenditure - - -	354,843	348,418	416,998	407,300	515,210	397,338	351,509	377,697	354,080	365,828

In 1903–04 and 1904–05 the receipts were unusually high, owing to large recoveries from the Home Government in connection with the employment of Royal Indian Marine vessels on Imperial Service.

(Scientific and Miscellaneous Departments.)

CHAPTER XXI.

SCIENTIFIC AND MISCELLANEOUS DEPARTMENTS.

Much progress has been made in recent years in the application of science in various branches of the work undertaken by Government in India. The growth during the decade of expenditure on "Scientific and other Minor Departments" was noticed in the chapter on Finance.* An account has already been given of some of the scientific departments that come most closely into touch with the life of the people. The Agricultural Department—which has shown the most rapid development, and now stands, as regards cost, in the front rank with the Survey of India—and the Civil Veterinary Department have been dealt with in the chapter on Agriculture, and the various branches of medical research work in the chapter on Public Health and Sanitation. Mention has been made also of the Forest Research Institute. There remain a number of departments that call for some notice here, mainly from the point of view of the practical bearings of their work. It is impossible to do more than indicate the nature of their more purely scientific work, much of which is of great importance. Fuller information is given in a collected form in the annual report of the Board of Scientific Advice.

The Board of Scientific Advice, which may be mentioned first, was established in 1902 to co-ordinate official scientific inquiry, to ensure that research work is distributed to the best advantage, and to advise the Government of India in prosecuting practical research into those questions of economic or applied science on the solution of which the agricultural and industrial development of the country so largely depends. The Board includes the heads or leading representatives of the Survey, Agricultural, Civil Veterinary, and other scientific departments, with the Inspector-General of Forests and the Director of the Indian Institute of Science. The programmes of investigation of the various departments are submitted to it for discussion and arrangement, and an annual report is published on the work done, as well as a general programme of research for the ensuing year. The reports and the programmes formulated are communicated for consideration to an Advisory Committee of the Royal Society, which from time to time furnishes valuable suggestions and advice.

The Survey of India.—The Survey of India Department was formed in 1878 by the amalgamation of the Great Trigonometrical Survey, the Topographical Survey, and the Revenue Survey Departments. It includes an "Imperial" service, recruited mainly from officers of the Royal Engineers and the Indian Army, and a "Provincial" service, recruited in India, besides subordinate officers. To this staff is entrusted the management of the Great Trigonometrical Survey, and the carrying out of the topographical and forest survey operations by which the spaces between the principal triangulation lines are filled. The department also undertakes work connected with tidal and levelling operations and the magnetic survey, map production, and miscellaneous survey work for other departments. It no longer carries on cadastral survey work, which has been made over entirely to the provincial land records and settlement departments since 1908, though officers of the department are lent for the purpose if required. The department underwent during the decade extensive measures of reorganisation, which need not here be noticed in detail.

The Great Trigonometrical Survey of India was commenced in 1802, and the main triangulation of India proper was practically completed by about 1880. The principal triangulation work of the period now under review was carried on in Burma, Baluchistan, and Kashmir. In Burma the Great Salween and Upper Irrawaddy series of principal triangulation carried the chains of principal triangles further to the east and north, while in Baluchistan the Kalat longitudinal series formed an important extension towards the west. The latter series was completed up to the point of trijunction of Baluchistan, Persia, and Afghanistan in 1907–08; it will form one section of the great arc of parallel extending from Shanghai to Morocco.

As regards cadastral and forest surveys, it is unnecessary to add anything to what was said in the chapters on Land Revenue and Forests. Forest surveys are now carried out by the parties engaged on topographical surveys. The arrangements

* *See* page 159.

(Scientific and Miscellaneous Departments.)

regarding the latter class of surveys, which form the main work of the department, were greatly modified during the period under review as a result of the report of the Indian Survey Committee. The greater part of the Indian Empire had been topographically mapped before the beginning of the decade; but unfortunately no provision was made for keeping the older maps up to date. The Survey Committee was appointed by the Government of India in 1904 to consider the state of the maps in each province and the measures required to bring them up to date, the methods and expense of survey, the methods of reproduction, and the organisation of the department. They found that the Survey Department had been required, of recent years, to divert a great part of its establishments to field-to-field surveys in connection with the land revenue settlement, to the neglect of topographical work; that while the existing maps were undoubtedly good when they were made, and their accuracy, so far as they went, was unquestionable, they were published in an inconvenient size and were not up to modern standards in quality of reproduction; that they had not been prepared on any one uniform system and were deficient in heights and levels; and that in many parts of India they were so out of date as to be of little use. They recommended that, to overtake the arrears of revisional survey, and to secure that the map of India should be brought up to date, the department should be enlarged and an increased expenditure of £210,000 a year incurred for the next 25 years; that cadastral operations should be carried out by the Provincial Governments, survey officers, if lent, being seconded; that a definite programme should be laid down for India as a whole; that a new series of maps on the scale of 1 inch to a mile should be prepared to cover the whole of India; and that surveys should in future be made on the scale of 2 inches to the mile and reduced for publication.

It was finally decided that a scale of 1 inch to the mile would ordinarily be sufficient for both survey and publication, reserved forests and special areas being surveyed on the scale of 2 inches to the mile, and the half-inch scale being employed for waste and barren tracts. This decision somewhat reduced the standard of establishments and expenditure proposed by the Committee. The actual cost of the department in each year of the decade, as stated in the Finance and Revenue Accounts, is shown in the margin. In order to carry out the new scheme, it became necessary to revise in the field practically the whole of the existing 1-inch maps, and to survey on either the 2 or the 1 inch scale the whole of the country for which maps on neither scale had ever been prepared. It was proposed that the whole of the work should be carried out within 25 years.

	£
1902–03	97,513
1903–04	102,993
1904–05	119,490
1905–06	118,650
1906–07	157,506
1907–08	174,440
1908–09	185,984
1909–10	190,553
1910–11	185,348
1911–12	172,017

Up to the end of September 1911 the new topographical survey had been carried over 215,839 square miles out of a total of, approximately, 1,822,000 square miles included in the programme, and 495 sheets out of 6,328 of the new standard map had been printed. With a view to expediting the provision of good up-to-date maps, it has since been decided to adopt a scale of less than 1 inch to the mile for survey and publication in an increased area. It is expected that the survey will be completed by about 1935.

"Geographical" surveys on a small scale were carried out during the decade by survey detachments with the Aden, Seistan, and Tibet Missions, in Somaliland, and in various outlying regions.

Among the more purely scientific branches of work are pendulum observations in connection with the gravimetric survey, and the magnetic survey. The magnetic survey was commenced in 1901; by 1909 the preliminary survey was completed, except for the Himalayan-Karakoram regions, and the detail survey was taken in hand.

The last report on the work of the Survey of India is for the year ending on the 30th September 1911. During the year 12 parties were employed on the topographical survey, one on latitude observations, one on pendulum operations, one on triangulation and the selection of sites for base lines, one on tidal operations, in connection with which observations are taken by means of self-registering tide-gauges at nine stations, one on levelling operations, and one on the magnetic survey. Principal triangulation was carried further in the north and east of Burma, and in the north of Kashmir, where the possibility of joining up the Indian series with the Russian triangulation was under consideration.

The Geological Survey Department.—The Geological Survey Department is a comparatively small one, including about twenty superior officers. The establishment was

increased in 1906. Its first object may be said to be the preparation of the geological map of India, on which so many scientific and economic questions depend, but economic inquiries in connection with specific subjects constitute a branch of its work no less important than the geological surveys in the stricter sense. More purely scientific work is done also in mineralogy and petrology, and palæontology. Reports of the work done by the department are to be found in the Records and Memoirs of the Geological Survey of India, and in the "Palæontologia Indica." In economic work the department has kept in touch with the numerous developments of private enterprise. During the last few years a number of students have been trained as prospectors on behalf of various native states. During 1911 an examination of the ore-bodies of Sikkim was undertaken with a view to the preparation of a memoir on the copper deposits of India; a traverse was made across the Irrawaddy valley, at the request of the local Government, with a view to ascertaining the possibility of obtaining supplies of water under artesian conditions; and a member of the department was posted to Tavoy and Mergui to assist the local officials with advice regarding tin and wolfram-mining. Other work noted under the head "Economic Inquiries" had reference to asbestos, coal, galena, gold, petroleum, and steatite. Geological surveys were carried out in Assam, Bombay, Central India, Rajputana, Burma, the Central Provinces, the Punjab, and Sikkim. The expedition to the Abor country afforded an opportunity of exploring a tract of which the geological conditions were entirely unknown, and a large addition was made to the knowledge of this part of the Himalaya. No discoveries of any great economic importance were reported by any of the surveying parties.

Botanical and Zoological Surveys.—The Botanical Survey is under the direction of the Superintendent of the Royal Botanic Garden, Calcutta, with whom are associated the Economic Botanists belonging to the Agricultural Department. In 1912 the post of Reporter on Economic Products was abolished and replaced by that of Economic Botanist to the Botanical Survey. Much of the systematic botanical work of India is done for the department by forest officers and others. Over 2,000 specimens were obtained in 1911–12 by the officer deputed to accompany the Abor Expedition as botanist, and a material addition was made to the information available as to the vegetation of the little-known frontier region traversed.

In the field of zoology, survey work is carried on by the Indian Museum, the officers attached to which have during the last few years given special attention to a survey of the freshwater fauna of the Indian Empire. An important movement has recently been inaugurated by the Bombay Natural History Society, which has collected subscriptions for a survey of the mammals of India, and has started work with a trained collector. Mention may be made here of the series of volumes of the "Fauna of British India," published under the authority of the Secretary of State for India in Council, the first of which appeared in 1888. Among the volumes published during the period under review were two dealing with butterflies, one with ants, and a number with beetles, flies, and other insects. The vertebrates had been dealt with in earlier volumes. Some important work on insects injurious to man and plant-pests has also been done in recent years by medical and agricultural officers.

The Marine Survey.—The Marine Survey is administratively attached to the Royal Indian Marine, and draws its staff for the most part from that service. There are two surveying vessels. The main object of the Survey is to provide charts for the purposes of navigation; its sphere extends from Baluchistan to Siam, but its services are from time to time utilised outside those limits. An officer of the Indian Medical Service is attached to the Survey as surgeon-naturalist, for the purpose of examining and classifying zoological specimens. All the principal and most of the secondary ports in India and Further India had at the beginning of the decade been recently surveyed, and up to 1904 some 1,500 miles of coast had been accurately charted. Surveys were carried out during the decade on the coast of Burma and elsewhere.

Meteorological Department.—The work of the Meteorological Department falls into two parts, the directly useful and the purely scientific, aiming at the ascertainment of facts that may be of practical utility in future. The scientific work includes the experimental and theoretical examination of the physical processes, on the earth or in the sun, that determine the weather. The practical work consists chiefly in the collection and distribution of current weather information. The area under observation by the department embraces not only India but the whole of the Arabian

(Scientific and Miscellaneous Departments.)

Sea and Indian Ocean, the Persian Gulf, Persia, Arabia, Chinese Turkestan, and Tibet. There were 282 observation stations (of which 49 were non-departmental) at the close of 1911–12, ranging from the well-equipped observatories at Kodaikanal, Madras, Bombay, Alipore (Calcutta), Allahabad, and Lahore, to small stations at which observations of temperature, rainfall, and snowfall only are recorded. The department inspects their working and collects the results; it also studies the meteorology of the Indian Ocean by means of the logs of vessels arriving at Indian and other ports, and conducts seismographic observations. Experimental work has also been carried on for determining the conditions of the upper air by means of small free balloons. Special observations carried out during 1911–12 comprised wind observations, solar and terrestrial radiation observations, sunshine observations, underground temperature observations, seismological observations, barometric observations, and observations of temperature. There are a large number of rain-gauge stations in the different provinces, and great attention is now paid to the correct registration of rainfall. The actual rainfall for some years past is given and compared with the normal in the annual *Statistical Abstract of British India* (Table 118). Daily, weekly, and monthly weather reports, as well as seasonal forecasts and storm warnings, are issued. Warnings of approaching storms are sent to ports on the Bay of Bengal from Calcutta, and to ports on the Arabian Sea coast from Simla. The system of flood warnings to canal, civil, and railway officers, to military officers, and to private firms, continues to be useful, and 1,352 such warnings were issued from Simla during 1911–12. The publication of the meteorological atlas of the Indian seas has placed a large amount of valuable information at the disposal of navigators.

Forecasts supplied by the department during 1911–12 to the officials in charge of the Durbar arrangements at Delhi, and to the General Officer Commanding the Abor Expedition, are reported to have been of great assistance.

At Kodaikanal investigations into the nature of the activities in the sun's atmosphere were continued, and at Bombay the data of 60 years' magnetic observations were published.

The Archæological Survey Department.—Reference was made in the last decennial number of this Statement to the reorganisation of the Archæological Survey Department in 1899, when it was enlarged and put on a semi-permanent footing, and to the appointment of a Director-General of Archæology in 1902. In 1906 the department was placed on a permament footing and further enlarged. In four of the six circles into which India is now divided there is an Assistant Superintendent as well as a Superintendent, and a Government Epigraphist has been added to the headquarters staff. The primary function of the department is the conservation of monuments and buildings of historical or archæological importance, but much work is done also in the way of exploration and research. The department includes a number of officers with special architectural training. The performance of the work of the department under the first head was facilitated by the passing in 1904 of the Ancient Monuments Preservation Act, which was designed to secure the preservation to India of its ancient monuments, with particular reference to those in the hands of private owners, to control the traffic in antiquities, and to prevent the excavation of ancient sites by ignorant or unauthorised persons. During the first nine years of the decade some £240,000 altogether was expended on conservation and excavation, the great bulk of the expenditure coming under the former head. It is impossible in a limited space to give any satisfactory account of the work done in all parts of India during those years. One incident of special interest was the discovery in 1908–09, during excavations at Shahji-ki-dheri, near Peshawar, of the great stupa of King Kanishka, which was found to enshrine a reliquary containing what were believed to be the first authentic relics of the Buddha discovered in India. The relics were made over to a deputation of Burmese Buddhists and enshrined at Mandalay. Reference may be made also to the important discoveries of Dr. (now Sir Aurel) Stein in Eastern Turkestan in the years 1906–08, a report on which is expected to be published shortly.

In 1911, with a view to the collection of information regarding the principles and practice of present day architecture in India, the officers of this department were instructed to photograph, when on tour, any interesting types of modern Indian buildings, and to note the names and local rates of remuneration of craftsmen concerned in the design and decoration of such buildings. Some of the results have recently been published under the title of a Report on Modern Indian Architecture.

Linguistic and Ethnographical Surveys.—The work connected with the survey of the languages of Northern India and Bombay initiated in 1895 was practically completed, under the direction of Dr. (now Sir George) Grierson, by the end of the decade, when six volumes out of eleven in which it was proposed to publish the results of the survey had been printed, and most of the remainder were in the press. A scheme for a systematic ethnographic survey of the whole of India was sanctioned, as mentioned in the last decennial number of this Statement, in 1901. A Superintendent of Ethnography was appointed for each province, to carry out the work of the survey in addition to his other duties. Among the published results of the survey, mention may be made of a large work by Mr. Edgar Thurston, C.I.E., on the "Castes and Tribes of Southern India," a "Glossary of Punjab Tribes and Castes," and a number of volumes on separate tribes in Eastern Bengal and Assam and Burma.

(Education.)

CHAPTER XXII.

EDUCATION, LITERATURE AND THE PRESS.

Education.

Education in India, in the modern sense of the word, may be said to date from the year 1854, when the Court of Directors, in a memorable despatch, definitely accepted the systematic promotion of general education as one of the duties of the State, and emphatically declared that the type of education they desired to see extended in India was that which had for its object the diffusion of the arts, science, philosophy, and literature of Europe; in short, of European knowledge.

The acceptance of this duty was an important departure in policy. The advent of British rule found in India systems of education of great antiquity existing among both Hindus and Muhammadans, in each case closely bound up with their religious institutions. Schools of learning were formed in centres containing considerable high-caste populations, where Pandits gave instruction in Sanskrit grammar, logic, philosophy, and law. This advanced instruction was strictly confined to youths of the higher castes. For the lower classes, village schools were scattered over the country in which a rudimentary education was given to the children of traders, petty land-holders, and well-to-do cultivators. The higher education of Muhammadans was in the hands of men of learning, who devoted themselves to the instruction of youth. Schools were attached to mosques and shrines and supported by State grants in cash or land, or by private liberality. The course of study in a Muhammadan place of learning included grammar, rhetoric, logic, literature, jurisprudence, and science. Both systems, the Muhammadan no less than the Hindu, assigned a disproportionate importance to the training of the memory, and sought to develope the critical faculties of the mind, mainly by exercising their pupils in metaphysical refinements and in fine-spun commentaries on the meaning of the texts that they had learned by heart.

The first instinct of British rulers was to leave the traditional modes of instruction undisturbed and to continue the support that they had been accustomed to receive from Indian rulers. The Calcutta Madrassa for Muhammadans was founded by Warren Hastings in 1782, and the Benares College for Hindus was established in 1791. Provision was made for giving regular assistance to education from public funds, on what appears, after an interval of a hundred years, a very modest scale, by a clause in the Charter Act of 1813, which empowered the Governor-General in Council to direct that one lakh of rupees in each year should be "set apart and "applied to the revival and improvement of literature and the encouragement of the "learned natives of India, and for the introduction and promotion of a knowledge of "the sciences among the inhabitants of the British territories in India."

This grant was at first applied to the encouragement of Oriental methods of instruction by paying stipends to students. But the presence of the British in India brought about profound changes in the social and administrative conditions of the country; and these in their turn reacted on the educational policy of Government. The well-known Minute written by Lord Macaulay in 1835 marks the point at which official recognition was given to the necessity of public support for western education. There followed a period of attempts, differing in different provinces, to extend English education by the establishment of Government schools and colleges, and by strengthening the indigenous schools; while missionary effort continued to play an important part in promoting educational progress.

In their despatch of 1854, the Court of Directors announced their decision that the Government should actively assist in the more extended and systematic promotion of general education in India. The measures prescribed for carrying out this policy were the constitution of a department of public instruction; the foundation of universities at the Presidency towns; the establishment of training schools for teachers; the maintenance of the existing Government colleges and schools of a high order, and the increase of their number when necessary; increased attention to all forms of vernacular schools; and, finally, the introduction of a system of grants-in-aid which should foster a spirit of reliance upon local exertions, and should in course of time render it possible to close or transfer to the management of local bodies many of the existing institutions. The attention of the Government was to be specially directed to placing the means of

acquiring useful or practical knowledge within the reach of the great mass of the people.

The principles laid down in 1854 were reaffirmed in 1859, when the administration had been transferred to the Crown, and still guide, in the main, the efforts of Government for the better education of the people. The Universities of Calcutta, Madras, and Bombay were incorporated in 1857, and those of the Punjab and Allahabad in 1882 and 1887 respectively. The growth of schools and colleges proceeded most rapidly between 1871 and 1882, and was further augmented by the development of the municipal system, and by the Acts that were passed from 1865 onwards providing for the imposition of local cesses that might be applied to the establishment of schools. By the year 1882 there were more than two million and a quarter of pupils under instruction in public institutions. The Commission of 1882–83 furnished a valuable report upon the state of education as then existing, and submitted further detailed proposals for carrying out the principles of the despatch of 1854. They advised increased reliance upon, and systematic encouragement of, private effort, and their recommendations were approved by the Government of India. Shortly afterwards a considerable devolution of the management of Government schools upon municipalities and district boards was effected, in accordance with the principles of local self-government then brought into operation.

Since 1882 the condition and progress of the educational system have periodically been passed under review, and Government has on each occasion issued such fresh regulations and orders as appeared at the time to be desirable. The review made in 1898 was followed by a searching inquiry and vigorous measures of reform. A conference of Indian educationalists and administrators was convened at Simla in 1901 to discuss all branches of the subject. Subsequently a Director-General of Education was appointed; a Commission was constituted to inquire into the condition, prospects, and needs of university education; and special inquiries into the system of technical education were instituted. Further reference to the measures taken under these and other various heads will be made below.

Up to 1910 questions connected with education were dealt with by the Home Department of the Government of India. An important step was taken when, in that year, a separate Education Department was constituted, and a sixth member added to the Governor-General's Executive Council to take charge of it. The new department is charged primarily with the administration of education, but its sphere includes also questions connected with local self-government, sanitation, and some other branches of administrative business. On the creation of the Education Department and Education Membership, the post of Director-General of Education was abolished, the staff of the office being absorbed in that of the Education Department.

The most recent of the quinquennial reviews of the progress of education in India, which was laid before Parliament in 1909 [Cd. 4635 and 4636], dealt in detail with the five years ending on the 31st March 1907. The second half of the period covered by this Statement will be fully dealt with in a similar review. The subject must in this chapter be treated on somewhat general lines.

Two important Resolutions issued by the Government of India—the one near the beginning, and the other since the end, of the decade—contain much information as to past progress and full statements of the policy and intentions of Government. The first, dated the 11th March 1904, was printed as an appendix to the fourth quinquennial review [Cd. 2181 of 1904]. The second was issued on the 21st February 1913. Both Resolutions, and particularly the second, which constitutes the most recent statement of the Government of India's views as to future educational progress, have been extensively drawn upon for the purposes of this chapter.

A quotation from the Resolution of the 21st February 1913, referring to some of the general considerations that must be borne in mind in reviewing the progress of education in India, may be given here: "The defects of educational systems "in India are well known and need not be restated. They have been largely due to "want of funds. Of late years there has been real progress in removing them. In "the last decade* the total expenditure from all sources on education has risen from "4 crores to nearly 7¼ crores. The progress has been especially great since Lord "Curzon's Government introduced large measures of educational reform. In the last "four years the number of those under instruction has increased from about 5⅓ to 6⅓ "millions. Again, the formerly crushing weight of examinations has been appreciably

* *i.e.*, 1901 to 1911.

" lightened; a commencement has been made in the reform of university and college " organisation; and the grants from public funds to private institutions have almost " doubled in the past nine years. These facts speak for themselves. Nor must the " great benefits, which education has conferred on India, be ignored or minimised. " Criticism based on imperfect analogies is often unjust. It is not just, for instance, to " compare Indian systems still for the most part in their infancy with the matured " systems of the modern western world, or to disregard the influences of social " organisation and mentality. Again, the common charge that the higher education of " India has been built up on a slender foundation of popular education and that its " teaching agency is inefficient is one that might have been levelled against every " country in Europe at some period of its history. India is now passing through " stages taken by other countries in their time."

Before proceeding to a review of the progress made in recent years, some explanation must be given of the application in India of the terms used in classification.

Educational institutions in India are of two classes:—

(1) Those in which the course of study conforms to the standards prescribed by the Department of Public Instruction or by the University, and which either undergo inspection by the Department, or else regularly present pupils at the public examinations held by the Department or by the University. These institutions are called "public," but may be under either public or private management. To the latter class, for example, belong the "aided schools," receiving grants from Government or from local or municipal boards, that occupy so important a place in the systems of Madras, Bengal, and other provinces.

(2) Those that do not fulfil the above conditions, and are called "private."

As regards public institutions, the system of education operates, generally speaking, through three grades of institutions, viz.:—

(i) Primary schools, which aim at the teaching, through the medium of a vernacular, of reading, writing, and such elementary knowledge as will enable a peasant to look after his own interests.

(ii) Secondary schools, the instruction in which is more advanced, but does not go beyond the matriculation or school-leaving certificate standard. The first division of these schools is into English and vernacular. Those in which English forms, generally speaking, part of the regular course of study in the lower and the medium of instruction in the higher classes, are counted as English schools; if English is not taught, or is an optional subject only, they are reckoned as vernacular. The second division of secondary schools is into high and middle schools, the former, practically all of which are English, teaching up to the matriculation or school-leaving certificate standard, the latter stopping at a lower stage.

(iii) Colleges, the students in which, having passed the matriculation examination of a university, are reading for the examinations required for a degree.

In addition to these there are various institutions of a special character, such as technical schools teaching arts and industries, engineering, and other branches of applied science; law schools; medical schools and colleges; and training colleges and normal schools for the training of teachers.

Private institutions are usually classified as "advanced," teaching the classical Oriental languages, or "elementary," including under this head Koran schools and those teaching a vernacular only or mainly. The statistics relating to private institutions are unreliable.

General Statistics.—The area covered by the returns from which the statistics in this chapter are quoted includes, besides British India, a large number of the less important native states, the figures for which are incorporated with those of the provinces with which they are in political relations. In Bombay all native states within the limits of the Presidency, except Baroda, are included, and they account for a considerable proportion—roughly, a quarter—of the total figures; in other provinces the proportion is much less.

The tables below give a general view of the position as regards education at the beginning and end of the period under review.

Number of Educational Institutions.

	1902.						1912.					
	Public Institutions.				Private Institutions.	Total.	Public Institutions.				Private Institutions.	Total.
	Primary Schools.	Secondary Schools.	Special (Training and other) Schools.	Colleges.			Primary Schools.	Secondary Schools.	Special (Training and other) Schools.	Colleges.		
Bengal	48,586	2,510	631	65	9,998	61,790	39,466	1,629	4,815	46	3,859	49,815
Eastern Bengal and Assam*	2,977	151	41	2	255	3,426	22,680	1,316	539	15	2,165	26,715
United Provinces	7,650	535	63	39	6,071	14,358	10,215	636	235	47	5,430	16,563
Punjab	2,583	385	19	16	3,850	6,853	4,054	364	56	19	2,918	7,411
N.W. Frontier Province	162	28	—	1	927	1,118	288	31	1	1	580	901
Central Provinces and Berar	3,394	284	16	5	13	3,712	3,504	441	15	6	6	3,972
Burma	4,250	369	119	2	13,543	18,283	5,316	951	267	2	16,675	23,211
Ajmer-Merwara	50	14	1	1	79	145	60	22	7	1	132	222
Coorg	74	2	1	—	22	99	86	3	1	—	35	125
Baluchistan	21	3	—	—	†	24	55	6	—	—	96	157
Madras	19,875	735	135	46	5,699	26,490	25,206	440	178	35	5,193	31,052
Bombay	8,987	494	52	15	2,703	12,251	12,763	559	91	15	3,032	16,460
Total	98,609	5,510	1,078	192	43,160	148,549	123,693	6,398	6,205	187	40,121	176,604

Total Number of Scholars on the Rolls of above Classes of Institutions.

	3,272,010	561,068	35,180	23,291	638,999	4,530,548	4,992,440	929,303	180,166	36,334	657,728	6,795,971

* Assam only in 1902. † Number not stated.

The total number of educational institutions thus increased during the decade from about 148,500 to about 176,600, and the number of pupils in all classes of institutions from 4,530,000 to 6,796,000. The total number of boys under instruction rose from 4,084,000 to 5,841,000, or by 43 per cent., and the total number of girls from 446,000 to 955,000, or by 114 per cent. The schools have to serve between them some 600,000 villages and 1,600 towns. The bulk of the private schools are returned as elementary institutions.

In some cases comparison between the different figures given in the table is vitiated by differences and changes in classification. Thus 360 "middle vernacular" schools in Madras, classed as secondary in 1911, appear to have been recorded as primary schools in 1912.

A noticeable feature is the large number of private schools in Burma. In almost every village of any importance in that province there is a monastery, and in the majority of these monasteries the little boys of the neighbourhood learn their letters. There exists, therefore, throughout Burma the machinery for the education of almost every boy of school-going age; the system fails only in that the teaching is, as a rule, of a low standard. Only a small proportion of the monastic schools are registered and subject to the slight degree of control by the Education Department that registration connotes. Some boys proceed afterwards to lay schools and receive instruction on more modern lines, but most do not.

Not all of the pupils attending a school of either grade—primary or secondary—are in the corresponding stage of instruction. A large proportion of the pupils at the secondary schools are in the primary stages, and in Madras a certain number of those attending the primary schools are shown as having passed into the middle stage of instruction. In the first of the two tables below the pupils in public schools are classified according to the stage of instruction reached. The comparatively small numbers at the colleges and special schools are not shown separately, but are included in the total figures.

The true significance of the figures in this table may be better appreciated by comparing the numbers of pupils under instruction, in all classes of institutions, with the population of school-going age, taken for this purpose at 15 per cent. of the whole population. This is done in the second table below, which also shows the progress of education from another point of view, as judged by the proportion of the population shown in the census returns as able to read and write. To give an idea of the true position, it is necessary to distinguish the male from the female population.

Number of Scholars on the Rolls.

	1902.						1912.					
	In Public Schools for General Education.				In Private Schools.	Total, all classes of Institutions.	In Public Schools for General Education.				In Private Schools.	Total, all classes of Institutions.
	Lower Primary Stage.	Upper Primary Stage.	Middle Stage.	High Stage.			Lower Primary Stage.	Upper Primary Stage.	Middle Stage.	High Stage.		
Bengal	1,334,722	96,962	53,625	35,364	119,639	1,667,251	1,240,939	83,064	45,251	43,062	54,443	1,609,360
Eastern Bengal and Assam*	92,725	4,397	2,626	1,307	5,557	108,020	874,621	59,634	38,907	28,678	49,248	1,075,124
United Provinces	293,219	45,966	20,640	2,304	84,278	452,517	481,780	74,209	46,473	6,887	90,412	712,000
Punjab	121,635	34,026	18,912	3,898	65,820	248,123	222,035	51,426	27,169	7,467	64,946	381,113
N.W. Frontier Province	9,264	2,262	1,099	313	13,626	26,581	18,880	4,160	1,786	560	9,428	34,911
Central Provinces and Berar	148,976	29,811	13,885	1,824	447	195,937	251,071	38,308	18,834	3,285	219	313,205
Burma	135,654	18,176	5,638	836	153,502	316,156	206,899	44,071	14,619	1,138	174,945	445,255
Ajmer-Merwara	2,751	1,241	874	51	3,592	8,798	3,975	1,363	826	175	4,508	11,134
Coorg	3,189	788	233	102	433	4,758	5,041	766	302	73	608	6,811
Baluchistan	*1,057 pupils, not classified.*				†	—	*2,892 pupils, not classified.*				1,224	4,116
Madras	618,683	52,863	40,183	19,253	121,013	861,479	1,013,841	57,174	46,137	22,234	127,179	1,280,065
Bombay	366,909	153,895	23,829	17,111	71,092	639,868	549,969	216,528	36,923	28,311	80,568	922,877
Total (excluding Baluchistan)	3,127,727	440,387	181,544	82,363	638,999	4,529,491	4,869,051	630,703	277,227	141,870	656,504	6,791,855

* Assam only in 1902. † Number not stated.

Proportionate Numbers of Pupils under Instruction and Literate Persons among Population.

	Percentage of Population of School-going Age under Instruction.				Total Number of "Literate" Persons per 10,000 of Population.				Number of Persons "Literate" in English per 10,000 of Population			
	1902.		1912.		1901.		1911.		1901.		1911.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Bengal	27·1	1·8	32·6*	4·3*	1,067	55	1,174	83	89	6	146	11
Eastern Bengal and Assam†	21·1	1·9	34·6	6·1	667	44	1,057	73	64	5	110	3
United Provinces	11·7	·6	17·8	1·7	578	24	611	50	35	5	49	7
Punjab	13·5	1·9	19·8	4·0	676	38	653	64	63	6	90	11
N.W. Frontier Province	14·1	1·5	17·2	2·9			568	59			83	7
Central Provinces	14·9	1·2	24·2	2·6	583	22	684	32	37	4	61	6
Berar	24·0	1·4			856	32			56	4		
Burma	38·9	5·9	39·4	8·9	3,782	447	3,761	608	61	13	91	20
Ajmer-Merwara	19·0	4·8	24·3	4·1	1,206	87	1,241	135	165	29	232	30
Coorg	16·4	4·5	24·7	10·4	1,281	157	1,570	279	141	24	169	31
Baluchistan	*Figures not available.*											
Madras	25·6	4·4	34·4	7·0	1,182	93	1,379	135	90	10	121	13
Bombay	27·9	5·0	37·1	7·8	1,136	97	1,206	145	112	15	171	28
Total‡	22·2	2·5	29	5	1,038	73	1,131	111	74	8	Separate figures not available.	
Total, Native States§					781	56	792	82	37	4		
Total, India					983	69	1,056	105	68	7	95	10

* Figures for 1911. † Assam only in 1901 and 1902. ‡ Excluding Baluchistan.
§ The census figures in the body of the table are for British India only.

The census figures show a considerable advance during the decade in the number of persons classed as "literate," though the introduction of a uniform test (the ability to write a letter and read the reply) in place of a varying practice is held to have raised the standard by which ability to write and read is judged. At the same time they show how wide a field remains for the further diffusion of education in India. In 1911, taking India as a whole, rather more than one male in ten and one female in a hundred could read and write; less than one male in a hundred and one female in a thousand could read and write English. The proportions are rather higher if the figures for British India alone are taken, though Travancore, Cochin, and Baroda among the native states show figures that will stand comparison with those for any province except Burma. The latter province owes its prominent position to the diffusion of elementary instruction by the Buddhist monks; but the standard of their teaching, as has already been mentioned, is very low, and if a higher test than the mere ability to read and write were adopted, the province would occupy a less distinguished place.

Primary Education.—The special obligation of Government in regard to the vernacular education of the masses, which was declared by the Court of Directors in 1854, has been reaffirmed by the Government of India whenever they have reviewed the progress of education, but various causes—including financial difficulties, the indifference of the classes mainly concerned to the benefits of education, and the fact that the efforts of the educated classes are more readily directed towards English education—have contributed to retard the growth of primary instruction. The figures already given have shown that the great bulk of the pupils in the Indian schools are in the primary stages of instruction, and that the number of pupils in these stages increased greatly during the decade; but in any particular year a large proportion of the population of school-going age—a considerable majority of boys, and all but a small fraction of girls—are shown as not attending even a primary school. The total number of public primary schools increased between 1901–02 and 1911–12 by over 25 per cent., and the number of pupils attending them by over 50 per cent., while the total number in the primary stages of instruction increased by 54 per cent. It may be remarked here that the schools or departments imparting primary education that act as feeders to secondary schools, and belong in this sense to the system of secondary education, are, generally speaking, distinct (except in Bombay) from the primary schools that provide vernacular education for the masses. In view of the special importance of primary instruction, the distribution of pupils in the primary stages is shown below in greater detail than in the table already given.

Distribution of Pupils in Primary Stages in Public Schools.

	1902.						1912.						Percentage Increase in Ten Years in Total Numbers of Pupils in Primary Stages.	
	Lower Primary Stage.				Upper Primary Stage.		Lower Primary Stage.				Upper Primary Stage.			
	Not reading Printed Books.		Reading Printed Books.				Not reading Printed Books.		Reading Printed Books.					
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Bengal	298,650	35,034	939,658	61,380	94,882	2,080	375,770	83,244	701,975	79,960	80,041	3,023	37	191
Eastern Bengal and Assam*	9,608	894	74,858	7,365	4,291	106	332,619	99,988	397,938	44,076	53,842	792		
United Provinces	22,214	2,331	256,112	12,562	44,712	1,254	56,911	10,744	380,622	33,503	71,865	2,344	58	188
Punjab	1,807	480	106,786	12,562	2,566	1,460	1,570	562	190,480	29,423	47,280	4,146	69	135
N.W. Frontier Province	171	—	8,601	492	2,239	23	148	73	16,744	1,915	3,934	226	89	330
Central Provinces and Berar	59,847	6,268	76,659	6,202	28,479	1,332	77,801	13,828	144,972	14,470	36,564	1,744	57	118
Burma	—	—	103,039	32,615	15,221	2,955	—	—	141,379	65,520	35,771	8,300	49	107
Madras	50,497	17,516	461,331	89,339	46,785	6,078	142,348	54,297	675,627	141,569	49,976	7,198	55	80
Bombay	120,339	38,504	178,565	29,001	142,347	11,548	196,178	64,990	242,500	46,301	197,275	19,253	44	65
Total, all provinces (except Baluchistan)	565,213	101,499	2,208,847	252,168	413,383	27,004	1,185,162	328,329	2,897,266	458,294	583,364	47,339	46	119

* Assam only in 1902.

The large proportion of girls in the lowest stage, and the increase in their total numbers, are noticeable features.

The comparatively small proportion of pupils in the upper primary stage points to the conclusion, even when allowance is made for the large access of new pupils during the past ten years, that a large number of pupils do not get beyond the lower primary stage and receive therefore only a very elementary education.

The expansion of public primary education was much greater during the period under review than in the preceding decade, when the number of primary schools increased by less than 1,500, and the number of pupils in the primary stages by only 14 per cent. The established policy of encouraging the spread of primary education received a fresh stimulus from the orders issued by the Government of India in 1901 and the Imperial grants made in 1902 and 1905. The attempts made to improve the quality of the teaching and to adapt it more closely to the needs of the people, and the mild pressure to send children to school that results from its being made known that Government desires them to attend, count for something in raising the numbers of pupils; but the most potent factor was no doubt the increase in the expenditure of public funds upon the provision and maintenance of schools.

The propositions that illiteracy must be broken down and that primary education has, in the present circumstances of India, a predominant claim upon the public funds, represent accepted policy no longer open to discussion, and in their latest orders the Government of India again place the extension of primary education in the forefront of

their programme. For financial and administrative reasons of decisive weight they have refused to recognise the principle of compulsory education; but they desire the widest possible extension of primary education on a voluntary basis. As regards free elementary education, the time has not yet arrived when it is practicable to dispense wholly with fees without injustice to the many villages that are waiting for the provision of schools. The fees derived from those pupils who can pay them are now devoted to the maintenance and expansion of primary education, and a total remission of fees would involve to a certain extent a more prolonged postponement of the provision of schools in villages without them. In some provinces elementary education is already free, and in the majority of provinces liberal provision is already made for giving free elementary instruction to those boys whose parents cannot afford to pay fees. In the North-West Frontier Province education has been made free in all public primary schools and departments from the 1st April 1912. In Assam and Baluchistan elementary education is entirely free. Elementary education is free also to a large extent in the rural districts of the Punjab, where, as in some districts of the United Provinces, all sons of agriculturists get their education free. In Burma a large proportion of the children pay no fees. In other provinces proportions of the school population varying from 20 to 33 per cent., or more, pay no fees in elementary schools. Local Governments have been requested to extend the application of the principle of free elementary education amongst the poorer and more backward sections of the population. Further than this it is not considered possible at present to go.

The orders recently issued by the Government of India do not, strictly speaking, come within the purview of this Statement; but it may be noticed that they contemplate a large expansion of primary schools, subject to the principle that the steady raising of the standard of existing institutions should not be postponed to increasing their number when the new institutions cannot be efficient without a better-trained and better-paid teaching staff. Among the general principles laid down for guidance are that primary teachers should be properly trained, and that trained teachers, even in elementary schools, should receive not less than Rs. 12 a month.

While laying down these and other general principles, the Government of India recognise that in regard to primary education conditions vary greatly in different provinces. In the old province of Bengal, for instance, where there is already some sort of primary school for a little over every three square miles of the total area of the province, the multiplication of schools may well not be so urgent a problem as an increase in the attendance and an improvement in the qualifications of the teachers. In some parts of India at the present time no teacher in a primary school gets less than 12 rupees a month. In Burma all conditions are different, and monastic schools are an important feature of the organisation. Different problems, again, present themselves where board schools and aided schools respectively are the basis of the system of primary education.

Secondary Education.—The three classes of secondary schools have already been mentioned. The vernacular middle schools stand apart, as constituting a prolongation of the primary course, and completing the instruction of those who do not aspire to an English education. In Bombay, schools of this description have always been classed as primary, and the term "middle vernacular school" has not been used. The same practice is adopted in the returns from Madras for the last year of the period under review, the total of middle vernacular schools being thus reduced by about 360. The total numbers of secondary schools, and of pupils attending them, are shown in the marginal table. In some parts the number of vernacular continuation ("middle vernacular") schools fell off during the decade, owing to the popularity and cheapness of English education, but the

Public Secondary Schools.

	1902.		1912.	
	Schools.	Pupils.	Schools.	Pupils.
For boys:				
High schools	1,070	244,782	1,219	390,562
Middle English schools	2,034	165,807	2,477	280,349
Middle vernacular schools	1,941	111,663	2,196	206,676
For girls:				
High schools	100	9,908	135	17,203
Middle English schools	159	10,821	197	17,653
Middle vernacular schools	203	17,661	168	15,734
Total*	5,507	560,642	6,392	928,183

* Excluding Baluchistan.

total shows a considerable increase, in spite of the reclassification in Madras. It is in these schools that competent teachers for primary schools will be prepared. Technical and industrial progress also are likely to create numerous openings for men with a good vernacular education.

As has already been noticed, a large proportion of the pupils attending secondary schools are in the primary stages of instruction. A further table showing the distribution of scholars in the secondary stages of instruction is given below.

Distribution of Pupils in Secondary Stages in Public Schools.

	1902.				1912.				Percentage Increase in Ten Years in Total Numbers of Pupils in Secondary Stages.	
	Middle Stage.		High Stage.		Middle Stage.		High Stage.			
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Bengal	52,741	884	35,134	230	43,974	1,277	42,701	361	68	77
Eastern Bengal and Assam*	2,606	20	1,305	2	38,621	286	28,586	92		
United Provinces	19,924	716	2,156	154	45,321	1,152	6,690	197	136	55
Punjab	18,365	547	3,818	80	26,070	1,099	7,336	131	50	96
N.W. Frontier Province	1,099	—	313	—	1,761	25	560	—	64	—
Central Provinces and Berar	13,537	348	1,799	25	18,286	548	3,250	35	41	56
Burma	4,988	650	751	85	13,171	1,448	1,017	121	147	113
Madras	36,608	3,575	18,762	491	41,586	4,551	21,684	550	14	25
Bombay	22,440	1,389	16,501	610	34,287	2,636	27,254	1,057	58	85
Total, all provinces (except Baluchistan)	173,397	8,147	80,636	1,677	264,126	13,101	139,312	2,558	59	59

* Assam only in 1902.

The increase during the decade in the total number of pupils in the secondary stages was 58·8 per cent., as compared with 39·4 per cent. in the preceding decade. The steady growth of secondary education has been one of the most striking features in the history of education in India. In all provinces there is considerable eagerness among parents to afford their sons an English education, and the provision and maintenance of high schools are common objects of liberality among all sections of the community. The policy of Government, in view of the necessity of concentrating the direct energies of the State and the bulk of its available resources upon the improvement and expansion of elementary education, is to rely as far as possible on private enterprise in regard to secondary education. It may be summarised as the encouragement of privately managed schools under suitable bodies, maintained in efficiency by Government inspection, recognition, and control, and by the aid of Government funds.

Secondary education of one grade or another being the basis of all professional or industrial training in India, the importance of secondary English, and in particular of high school, education needs no emphasis, and reform in this sphere is recognised as an urgent educational problem. The improvement of secondary English education has for some time occupied the attention of the Government of India and the local Governments, and it is hoped in the near future to remedy many defects of the present system. The figures given above include many types of schools, from the most to the least efficient. Admirable schools have been and are maintained by missionaries and other bodies. But the underlying idea of the grant-system, the subvention of local organised effort, has not always been maintained; schools of a money-making type, ill-housed, ill-equipped, and run on the cheapest lines, have in certain cases gained recognition and eluded the control of inspection; schools have sprung into existence in destructive competition with neighbouring institutions; physical health has been neglected and no provision has been made for suitable residential arrangements and playing-fields; fee-rates have been lowered; competition and laxity in transfer have destroyed discipline; teachers have been employed on rates of pay insufficient to attract men capable of instructing or controlling their pupils; above all, the grants-in-aid have from want of funds often been inadequate. Especially do these conditions prevail in the area covered by the old provinces of Bengal and Eastern Bengal and Assam; a result due, no doubt, to the rapid extension of English education beyond the ability of the local Governments to finance it. In Bengal and Eastern Bengal the number of

(Education.)

high schools is greater than in the rest of British India put together, and the cost of their maintenance to public funds is proportionately less than a third of the cost prevailing in other provinces. A special inquiry showed that out of some 4,700 teachers in privately managed high schools in these areas about 4,200 were in receipt of less than Rs. 50 a month, some 3,300 of less than Rs. 30 a month, while many teachers of English and classical languages drew salaries that would not attract men to superior domestic service.

The policy now laid down centres in the improvement of the few existing Government schools, the increase of grants-in-aid, in order that aided institutions may keep pace with such improvement, and the multiplication and improvement of training colleges. The improvement of the pay and prospects of teachers is one of the reforms most urgently required.

One important advance in the sphere of secondary education in recent years has been the extended substitution of a school final examination or system of school-leaving certificates for the matriculation examination. It has been a frequent complaint that the courses of study in secondary schools were too literary in their character—or, in other words, that the high school courses were almost exclusively preparatory to the university entrance examination. Among the evil results attributed to this cause were confinement to a narrow range of studies and the discouragement of originality in handling them, and the encouragement of "cramming." The introduction of a school course complete in itself and of a modern and practical character, freed from the domination of the matriculation examination, was recommended in the first instance by the Education Commission of 1882. The gradual introduction of such alternative courses, analogous to what is known in England as a "modern side," and of "school final" examinations, intended not to dominate the courses of study, but to be adapted to them and to form the natural culminating point of secondary education, represent two aspects of the same movement of reform, while the schemes for school-leaving certificates worked out in Madras and the United Provinces may be said to represent a further advance. In some provinces, and particularly in Madras, real progress was made during the decade, as the figures below show :—

	1901–02.		1911–12.	
	School final (candidates).	Matriculation (candidates).	School final (candidates).	Matriculation (candidates).
Madras and Coorg -	194	7,682	4,305*	580
Bombay - - -	1,162	3,731	1,717	4,019
United Provinces -	346	1,704	1,189*	1,993
Central Provinces and Berar - -	85	523	684*	769
Burma - - -	—	284	104	164

In other provinces the school final examination has not yet been established except for special purposes.

In Madras the institution of the secondary school-leaving certificate scheme was possibly the most important new departure of the last quinquennium. The certificate is intended to give as complete evidence as possible of the character and result of a boy's school career, and takes account of conduct and of the work done at school as well as of the results of the final public examinations, which are, moreover, devised with a view to guarding against the effects attributed to the matriculation examination. Holders of secondary school-leaving certificates affording evidence of proficiency in certain subjects have been declared eligible for Government service, and a pass in the matriculation examination has been excluded from the list of qualifications for such service ; the University, on the other hand, has made new regulations for matriculation, under which a student may be registered as a matriculate by virtue of holding a school-leaving certificate accepted by the head of an affiliated college as evidence of fitness for a university course of study. The first public examination under the scheme was held in 1911, when 7,290 candidates appeared. In March 1912 there were 6,393 candidates, of whom 2,111 sought to improve the certificate obtained in the preceding year. Grants have been made by the local Government to enable schools to

* School-leaving certificate, excluding in Madras 2,111 candidates for supplementary certificates.

equip themselves for teaching special subjects—such as commercial subjects and manual training—under the scheme, and some extension in the range of the curricula was already noticeable at the end of the decade. A scheme of examination for school-leaving certificates has been introduced also in the United Provinces, where the first examination was held in 1910, with 325 candidates. In Bombay the school final examination, being recognised as the sole qualification for Government service, and not merely as an alternative in this respect to matriculation, was already popular at the beginning of the decade. In Burma a high school final examination was introduced in 1910 and has since January 1912 superseded matriculation as a pass-port to Government service. In the Central Provinces, where a school-leaving certificate examination was introduced in 1910, it was decided, for want of agency to conduct a complete local examination, that the test should consist of the university matriculation examination, supplemented by an oral and practical test conducted by the circle inspectors. The examination, as originally constituted, did not prove a success; the question of revising the arrangements was under consideration.

The Government of India have expressed the view that in other provinces a school final examination or school-leaving certificate should be introduced as soon as practicable.

Special Schools.—The development during the decade of the various classes of "special" schools is shown in the marginal table. Training schools for masters, technical and industrial and commercial schools, and medical schools all made marked progress. "Other schools" are mostly "miscellaneous" schools in Bengal. The various provincial reformatory schools are also included under this head. Fuller reference to the subjects of technical education and the training of teachers may be deferred until collegiate institutions have also been noticed.

	1902.		1912.	
	Institutions.	Scholars.	Institutions.	Scholars.
Training schools for masters	134	4,417	492	11,404
Training schools for mistresses	46	1,292	85	1,508
Schools of Art	7	1,399	8	1,602
Law schools	5	41	1	10
Medical schools	22	2,727	24	3,860
Engineering and surveying schools	31	1,175	14	926
Technical and industrial schools	84	4,977	247	12,262
Commercial schools	10	552	28	1,543
Agricultural schools	4	211	1	11
Other schools	735	18,389	5,305	147,040
Total	1,078	35,180	6,205	180,166

Collegiate Education.—There were throughout the period under review five universities in British India—those of Calcutta, Madras, Bombay, the Punjab, and Allahabad. The numbers of affiliated colleges and pupils at the beginning and end of the decade are shown in the table. The colleges are widely, but not at all evenly, distributed. Of the total number in 1912, the United Provinces had 47, Bengal 46, Madras 35, the Punjab 19, Bombay and Eastern Bengal and Assam 15 each, the Central Provinces 6, and Burma only 2. Only a small proportion of the scholars are females, the numbers being 264 in 1902 and 369 in 1912.

	1902.		1912.	
	Institutions.	Scholars.	Institutions.	Scholars.
Art Colleges:				
English	141	17,430	124	28,246
Oriental	5	503	17	1,452
Professional Colleges:				
Law	30	2,767	22	3,036
Medicine	4	1,466	4	1,396
Engineering	4	865	4	1,187
Teaching	5	190	12	552
Agriculture	3	70	3	267
Veterinary	—	—	1	198
Total	192	23,291	187	36,334

The Universities Commission and Universities Act.—The period under review was marked by changes of the first importance in the sphere of university education. In founding the Universities of Calcutta, Bombay, and Madras, the Government of India of the time (1857) took as their model the type of institution then believed to be best

suited to the educational conditions of India—the examining University of London. Experience, however, brought into prominence the disadvantages of a system that provided merely for examining students, and not for compelling them to study systematically under first-rate instruction. In 1902 the Government of India, whose attention had for some years been specially directed to the problems connected with university education, appointed a Commission to report on the constitution and working of the universities, and to recommend measures for raising the standard of university teaching and promoting the advancement of learning. After full consideration of the report of this Commission, and of the criticisms that it called forth, the Government of India came to the conclusion that certain reforms in the constitution and management of the universities were necessary. Among other things, the Commission recommended a reduction in the size of the senates, which from various causes—including the bestowal of fellowships in many cases by way of compliment only—had been unduly enlarged, to the prejudice of the good government of the universities. To give effect to this and other recommendations, the Indian Universities Act (VIII. of 1904) was passed.

The Act in the first place defined the functions of the universities in wide and general terms. Although it had not been intended, when the universities were founded, that they should be examining boards and nothing more, it had been thought sufficient, in framing their legal powers, to provide for their functions as degree-giving bodies, and the provisions in question were sometimes narrowly construed. The Act of 1904 specifically recognised the wider functions of the universities by declaring them to be "incorporated for the purpose (among others) of making provision for the instruction "of students, with power to appoint University Professors and Lecturers, to hold and "manage educational endowments, to erect, equip, and maintain university laboratories "and museums, to make regulations relating to the residence and conduct of students, "and to do all acts, consistent with the Act of Incorporation and this Act, which tend "to the promotion of study and research."

The importance of these provisions lay in the possibilities of future development that they indicated; for immediate purposes the important sections of the Act were those which, leaving untouched the principle of affiliating distant colleges to a central examining university, endeavoured to make this connection between college and university closer and more effective than it had hitherto been. To each university territorial limits were assigned; the conditions that a college must fulfil in order to receive and retain the privileges of affiliation were prescribed in some detail; and in order that the university might be satisfied as to the fulfilment of these conditions, systematic inspection of colleges by university inspectors was established. The Act also required the appointment of new senates, syndicates, and faculties for all the universities; it made the office of a senator tenable for five years only, instead of for life; it limited the number of senators and of syndics, while increasing the proportion of elected fellows and securing the presence of a strong professional element; and it required the senates to prepare and submit for the sanction of Government within a year (or longer, if the Government should so appoint) a new body of regulations, the Government having power, after consulting the senate, to make such additions and alterations as they considered necessary, and having power to make the regulations if the appointed time should pass without the senate submitting a draft.

Immediately after the passing of the Act, the Government of India made a recurring grant, to last for five years, of £33,300 per annum for the improvement of university and college education.

The new regulations of the five universities were promulgated during 1905 and 1906, without any considerable recourse on the part of Government to their power of amending the proposals placed before them by the senates.

The general type to which the Indian universities, as governed by the Act and the new regulations, approximate is briefly as follows. The university affiliates and inspects colleges, prescribes courses of study for students, holds examinations, and confers degrees; and it has powers (at present not developed to any great extent, though a beginning has been made, as noted below, at Calcutta and Madras) of becoming a teaching body. It affiliates colleges situated anywhere within its territorial limits, *i.e.*, up to an extreme range of 700 or 800 miles from headquarters. It does not manage the colleges, but lays down conditions to which they must conform in

order to obtain and retain affiliation, and satisfies itself as to the observance of these conditions by inspection. It admits to its preliminary examinations pupils who come from recognised schools, and lays down the conditions to which those schools must conform. The observance by the schools of the conditions is usually ascertained by the local Education Department. It admits to its university examinations, and confers degrees upon, students from affiliated colleges almost exclusively; others can be admitted only by special arrangement. The university is governed by a senate of from 75 to 100 members, about four-fifths of whom are nominated by Government, the remainder being elected by the senate or its faculties, or by the body of graduates of the university. The power of the university to affiliate or disaffiliate colleges or to make or amend regulations is subject to the sanction of Government.

Some of the principal changes embodied in the new regulations were (i) provision for periodical inspection of colleges as prescribed by the Act; formerly the universities, generally speaking, took no cognisance of the internal conditions of affiliated colleges; (ii) all universities now adopted regulations by which students not residing with parents or guardians must reside in hostels or approved lodgings; (iii) the provisions as to the exclusion of non-collegiate students from University examinations were made more stringent; (iv) all universities adopted regulations limiting admission to the matriculation examination to candidates who are sent up by recognised schools or have been under *bonâ fide* private tuition; (v) a minimum age for matriculation (15 or 16 years) was laid down by each university; formerly a minimum age was enforced only in the case of Allahabad. Numerous changes were made also in the courses of study, &c. All the universities agreed in preserving the English language as the chief instrument of study, and English literature as one of the most important subjects, and it may be noticed here that the Oriental faculty of the Punjab University, which alone has tried the experiment of carrying on university studies without recourse to the English language, has shown little vitality, and has modified the regulations for the Oriental degree courses, during the last quinquennium, so as to make them include a knowledge of English.

The passing of the Universities Act was accompanied by a genuine movement for the improvement of colleges throughout India. The colleges were not only brought under criticism and regulation, but were also supplied with funds, from both public and private sources, whereby their requirements, which were found to be very numerous, might be supplied. But although good work has been done, under conditions of difficulty, by the universities, and the Act of 1904 has had beneficial effects, the condition of university education is still far from satisfactory, in regard to residential arrangements, control, the courses of study, and the system of examination.

The day is probably far distant when India will be able to dispense altogether with the affiliating university. But it is necessary to restrict the area over which the affiliating universities have control by securing in the first instance a separate university for each of the leading provinces in India, and, secondly, to create new local teaching and residential universities within each of the provinces in harmony with the best modern opinion as to the right road to educational efficiency. The Government of India have decided to found a teaching and residential university at Dacca, and they are prepared to sanction, under certain conditions, the establishment of similar universities at Aligarh and Benares, and elsewhere as occasion may demand. They also contemplate the establishment of universities at Rangoon, Patna, and Nagpur. It may be possible hereafter to sanction the conversion into local teaching universities, with power to confer degrees upon their own students, of those colleges which have shown the capacity to attract students from a distance and have attained the requisite standard of efficiency.

Simultaneously the Government of India desire to see teaching faculties developed at the seats of the existing universities, and corporate life encouraged. It may be mentioned that in the case of Calcutta the University has already, as a sequel to the passing of the Act of 1904, assumed direct teaching as well as examining functions. A Professorship of Indian Economics has been established, and three more University Professors were to be added, while a number of University Lecturers have been appointed for the benefit of post-graduate students. In Madras a move has been made in the same direction by the appointment of some University Lecturers for the year beginning in July 1912.

(Education.)

A general view of the results of some of the chief university examinations in 1901–02 and 1911–12 is given by the table in the margin. It should be mentioned that the number of Bachelors of Science is not to be taken as a measure of the extent to which science is studied, as the Arts degree is in some cases granted upon science subjects. Leaving out of account the higher degree of M.A. and also the degree of Bachelor of Laws—which can only be taken after an Arts degree—the total number of graduates, including Licentiates of Medicine and Surgery and Engineering, from all the Indian universities was about 1,650 in 1901–02 and 2,960 in 1911–12. It is often stated that the output of graduates from the Indian universities is in excess of the number for whom there is employment; but the main feature brought out by the statistical returns is not that the number of graduates is large, but that the proportion of "wastage" is very high. A very large proportion of college students fall out by the way without completing successfully their university career. The phenomenon, peculiar to India, of candidates for employment urging as a qualification that they have failed at a university examination (meaning that they have passed the preceding examination and added thereto some years of study for the next) may be supposed to be due primarily to the large number of students whom the university rejects at its examinations before it grants the B.A. degree to the remainder. It would appear to indicate also that there is a certain dearth of graduates.

	1901–02.		1911–12.	
	Candidates.	Passes.	Candidates.	Passes.
Arts Colleges:				
M.A.	301	138	*	327
B.A.	3,918	1,459	4,358	2,477
B.Sc.	25	13	461	265
Intermediate or First Arts	7,576	3,156	*	4,765
Oriental Colleges:				
B.O.L.	4	2	—	—
Colleges for Professional Training:				
Law—LL.B.	1,328	582	1,947	1,025
Medicine—M.B.	14	2	14	6
L.M.S	251	100	*	130
Engineering—B.C.E. or B.E.	45	12	34	24
L.C.E. or first examination in engineering.	89	62	*	102
Matriculation	22,015	8,916	*	10,369

* Figures not available.

Technical and Professional Education.—Technical education received much attention, and made considerable advances, during the period under review. Some indication of its nature and extent is given by the figures for "special schools" quoted above. Reference has been made also in the chapter on Industries and Manufactures* to some of the new developments of the decade, including the appointment in some provinces of special officers to supervise industrial education, and the extended provision of instruction in weaving.

It is impossible in the limited space available to trace the progress of all of the many branches of technical education, using that term in its widest sense. Provision for such education has been made in the different provinces as rapidly as funds permitted, and the new schemes launched during the decade were very numerous. Most of them were the result of conferences held in the larger provinces to examine local needs carefully, and to recommend, with due regard to the actual requirements of the industries of the provinces, particular measures called for by local circumstances. Some of the principal developments may be briefly noticed.

Some details of the steps taken in Madras have already been given, in Chapter XVI. Under the head of technical education, the reorganisation of the School of Arts, referred to again below, and the development of several engineering schools, were among the features of the second half of the decade. As regards industrial schools, it was reported in 1912 that they had so far little relation to production on a commercial scale, having been established mostly by missionaries and being many of them schools of lace-making and needlework. But printing and book-binding, woodwork and metal-work, are taught in a number of schools. The numbers of pupils undergoing "commercial" education (meaning, in many cases, instruction in typewriting) has increased considerably in recent years. A scheme for sending selected teachers for training to the provincial College of Agriculture has been initiated. It is intended to employ such men in training schools with a view to the widest diffusion

* *See* page 272.

of agricultural knowledge through the general educational agencies that circumstances admit of.

In Bombay an extensive scheme was taken in hand as the result of a conference held in 1904. An important feature was the development of the three central institutions—the College of Science (now the College of Engineering) at Poona, and the Victoria Jubilee Technical Institute and Sir J. J. School of Art at Bombay, all of which have been greatly improved. The second half of the decade was a period of great expansion in technical and industrial education, but much remains to be done in increasing the efficiency of existing institutions as well as in the way of further expansion. It is reported also that only a small proportion of the pupils who pass through industrial schools follow up the trade or occupation for which they are trained. Instruction in textile work is given in a number of small industrial schools, as well as in the Technical Institute at Bombay, and is reported to be making fair progress. Commercial education is slowly increasing in popularity. A project for a College of Commerce in the city of Bombay has been sanctioned. Agricultural readers have been introduced in the village schools, but doubt is expressed whether under present conditions they serve any useful purpose. The higher teaching of science received a great impetus during the Governorship of Sir George Clarke (Lord Sydenham); a notable advance has been made by the establishment of a Royal Institute of Science at Bombay and the Madhavlal Science Institute at Ahmedabad.

In Bengal there are a number of technical, commercial and industrial schools. The Serampore Weaving Institute, opened in 1909, provides both a longer course intended to fit students to act as instructors or to take up positions of responsibility in manufacturing concerns, and a shorter practical course for local weavers. Weaving classes are also held at outlying centres. It is hoped that improvements will result from the recent appointment of a Superintendent of Industries.

In the United Provinces notable progress has been made since 1907, when the question of furthering industrial development and technical education was discussed at a conference at Naini Tal. The measures taken include the extension of the scope of the Thomason Engineering College, Rurki, so as to include instruction in textile industries and electrical and mechanical engineering, the improvement of the general industrial school at Lucknow, and the establishment of additional industrial schools, of a School of Arts and Crafts at Lucknow, a carpentry school at Bareilly, and an experimental weaving station at Benares. Experts for the three institutions last named were sent out from this country in 1911. Sanction has been given also to the establishment of a Technological Institute at Cawnpore for the chemistry of sugar manufacture and leather, textiles, acids, and alkalis. There are a number of weaving schools in different parts of the province. Commercial education will no doubt be stimulated by the introduction recently of a University commercial certificate.

The Punjab is still in the main the country of the agriculturist and the craftsman. For the former there is the Agricultural College, opened in 1909, while for the latter the Mayo School of Art at Lahore serves an increasingly useful purpose as the staff has been strengthened and the courses of study revised. Below the School of Art are a number of schools in which industrial training—usually carpentry or metal-work—forms part of the curriculum. Attempts have been made to introduce improved looms and better methods, but the province does not as yet possess an organised system of instruction in weaving. Commercial training is given in a few schools. Organised industries being comparatively small and few, technical education in the more restricted sense can hardly be said to exist as yet. An important development was the remodelling and establishment in new buildings at Rasul of the Government School of Engineering, which was taken over by the Government from the University in 1906. A staff with higher engineering qualifications has been provided, and the reorganised school moved into its new quarters in 1912. The local Government have under consideration the report of a committee appointed in 1911 to examine the possibility of further development in industrial education.

In the Central Provinces the Industrial School at Amraoti has been converted within the last quinquennium into the Berar Victoria Memorial Technical Institute, the buildings and shops being erected by popular subscription. It teaches mechanical engineering, up to a moderate standard, and trains men to work in the cotton gins and presses of Berar. An engineering school for the instruction of civil and mechanical engineers is being erected at Nagpur.

(Education.)

Technical education in Burma is not highly developed, and shows no striking advance. It is reported that managers of commercial and industrial undertakings, generally speaking, prefer to import their skilled labour. The Government School of Engineering at Insein was reorganised during the latter half of the decade, but the results anticipated were not realised, and the attendance fell off. Further changes have recently been made.

Special reference may be made to the four Government Schools of Art—at Calcutta, Madras, Bombay, and Lahore—of which those at Madras and Lahore are mainly industrial schools or schools of design. The staff and method of the Madras school were reorganised during the latter years of the decade. In the earlier years its functions as a school of art had been rather thrown into the shade by its industrial activity in connexion with the manufacture of aluminium ware, chrome leather goods, &c. It is now intended that it shall be concerned only with industrial art, the one concession to the claims of fine art being a class for painting. The aim is to develope the art industries of the Presidency—engraving, wood-carving, weaving, lacquer, and jeweller's work—on Indian lines. The Bombay School of Art has continued to control the artistic education of the Presidency with efficiency, and has since 1906 received an important addition in the shape of a fully-developed architectural school, which in 1911 had 140 students, as compared with 37 in the elementary classes existing in 1906. A pottery department, in charge of a skilled chemist, has also been added to the technical laboratories and studios. A survey of clays has been made, and a school of pottery is to be established. At Calcutta an interesting development is the rise of a new school of Indian painting, combining Indian treatment of subjects with western technique. The courses of study at the Mayo School of Industrial Art, Lahore, have been revised, and new workshops are being provided. It is proposed shortly to engage a number of experts and to provide the school with equipment for the teaching of such crafts as cotton-printing, enamelling, and pottery on the best lines, so that it may be of practical assistance to existing industries.

The progress made under the heads of agricultural, forest, and veterinary education has been noticed in the chapters on Agriculture and Forests.* The six provincial Agricultural Colleges (some of which are not shown in the returns of the Education departments) now contain over 300 students. Practical classes for agriculturists have also been established at various centres in several provinces. In the ordinary elementary schools, agriculture is not formally taught, but in some provinces an agricultural colour is given to the general scheme of education.

At the head of technical educational institutions may be placed the Indian Institute of Science at Bangalore, which was thrown open to pupils in 1911. This institution, which owes its existence to the generosity of the Tata family, seconded by liberal financial aid from the Government of India and the Maharaja of Mysore, was founded for the purpose of bringing science to the aid of Indian arts and industries. It provides for research, the application of new processes, and the production of thoroughly trained managers. At the outset attention was given more particularly to chemical industries and electrical engineering; it is contemplated that the Institute may become eventually a complete faculty of pure and applied science.

The institution of a system of State technical scholarships, tenable in the United Kingdom or elsewhere, has been referred to in Chapter XVI.† The report of a committee appointed to examine the working of the system has recently been laid before Parliament [Cd. 6867 of 1913]. The general conclusion of the committee is that the scholarship system has yielded good results, and may be made to yield even better results in future by the adoption of some simple reforms. It may be mentioned that the encouragement of technical education by such means has not been confined to Government. A large number of students have, for example, been granted scholarships, or financial assistance, with a view to their pursuing technical studies abroad, by the "Association for the Advancement of Scientific and Industrial Education of Indians," established in Bengal in 1904.

An inquiry has recently been carried out in India into the question of bringing technical institutions into closer touch and more practical relations with the employers of labour in India. The report submitted, which contains many suggestions, is under the consideration of Government.

It is unnecessary to refer at length to the progress of the specialised schools and colleges providing professional, as distinguished from technical, education. The

* *See* pages 238, 246, 259. † Page 273.

recognised medical schools now produce annually between six and seven hundred qualified medical practitioners, and much has been done in recent years in the way of increasing the provision for higher medical instruction and research. There has been a marked development also of legal education. In the first place it has been concentrated, so that the number of law schools and colleges has decreased; but expenditure has increased and greater efficiency has been attained. The courses have been remodelled, and in some cases lengthened. The College of Engineering (formerly the College of Science) at Poona has been enlarged, and its staff increased, while the classes in agriculture have been transferred to the new Agricultural College. The College of Engineering at Madras was also reorganised, and its staff increased, during the decade, and arrangements have been made for moving the college to a new site in view of the need for more laboratory and residential accommodation, and of the desirability of providing for further expansion to meet modern developments. In Bengal the Engineering Department of the Sibpur College prepares students for the Engineer branch of the Public Works Department.

The Training of Teachers.—It will be seen by reference to the figures already given that there was a very marked increase during the decade in the number of institutions for the training of teachers, and in the number of students, but it may still be said that few reforms are more urgently needed than the further extension and improvement of the facilities for training. The table in the margin shows the numbers of trained or certificated teachers, and of teachers with university degrees, in 1912. Similar figures for earlier years are not available. There are at present 15 colleges and other institutions for the instruction of those who will teach through the medium of English; these contain nearly 1,400 students under training. For the training of vernacular (mainly primary) teachers there are some 550 schools or classes, with over 11,000 students. The courses vary in length from one to two years. The number of teachers turned out by these institutions does not meet the existing demand, and is the more inadequate in view of the prospect of a rapid expansion of education in the near future.

	Total Number of Teachers in Public Schools.			
	Trained.	Untrained.	With Degree.	Without Degree.
Bengal	*Figures not available.*			
Eastern Bengal and Assam	5,818	28,989	720	34,087
United Provinces	7,565	14,129	779	20,915
Punjab	5,047	5,809	433	10,423
North-West Frontier Province	368	422	23	767
Central Provinces and Berar	2,663	6,826	178	9,311
Burma	2,520	9,085	97	11,508
Madras	18,994	29,129	1,502	46,621
Bombay	7,183	16,572	801	22,954

At the beginning of the decade there was no system of training of secondary teachers in either Bombay or Bengal. A secondary training college was established in Bombay in 1906, and is reported to have worked with much success under the somewhat discouraging conditions involved by the absence of special buildings and the tendency of untrained headmasters to look with dislike on the exponents of modern ideas. There has been in Bombay also a great improvement and extension of vernacular training colleges and schools. In Bengal two training colleges for teachers who teach through the medium of English have been at work since 1908 and 1910 respectively. In this province, where the provision of primary education depends to a considerable extent on the employment of ill-paid teachers in private venture schools, there are, besides a number of high-grade training schools for vernacular teachers, arrangements for supplying a less expensive training to the lower ranks of the teaching profession. The system, which was inaugurated in 1903, depends upon the provision of training classes at schools known as Guru training schools—these being upper primary schools to which are attached small classes of Gurus, who spend their time partly in improving their own education and partly in acquiring some knowledge of the art of teaching. A considerable number of Gurus have passed through this course of training.

In the Central Provinces lower-grade training, on somewhat similar lines, was given throughout the decade, by means of an apprenticeship or pupil-teacher system, and a similar system was adopted in the United Provinces in 1905. Both provinces have in addition training colleges and normal schools at which higher training is

given. The opening in 1911 of a training college at Jubbulpore affiliated to the University of Allahabad provided an institution that had been greatly needed in the Central Provinces.

In the United Provinces there are two training colleges for English teachers, six normal schools for vernacular secondary teachers, and a large number of district training classes for primary teachers.

The Punjab has a central training college at Lahore, for secondary teachers, and five normal schools for primary teachers, and there have been added since 1909 various training classes attached to vernacular middle schools, the object of which is to improve the qualifications of the large body of untrained assistant teachers in village schools. In Madras a scheme of reorganisation was in progress during the latter part of the decade. There was in 1912 one college, for graduate teachers, at Saidapet, below which were 64 training schools for masters and 21 for mistresses, with 2,829 and 444 scholars respectively. In Burma there has also been reorganisation, an important feature of which was the institution of a whole-time normal or training course, and the more complete separation of normal from ordinary schools. There is also a teacher's examination for students who have not passed through training schools.

Female Education.—The tables already given have shown that the education of girls, though notable progress was made during the decade, is still very backward. The total figures are brought together in the margin. Altogether, about 5 per cent. of the female population of school-going age were under instruction in 1912, as compared with 2·5 per cent. in 1902. In the main, when female education in India is spoken of, it connotes primary education, that is to say, the teaching of little girls to read and write in the vernacular, and to do easy sums and a little needlework. The great majority of Indian girls who go to school never proceed beyond this stage. In the higher stages a large proportion of the scholars are Europeans, Anglo-Indians, Indian Christians, or Parsis. Of the total number of girls under instruction, about 43 per cent. attend boys' schools. In all provinces girls are admitted to boys' schools and stay there up to the age of eight or thereabouts. The provinces differ in the extent to which they practice co-education. In their efforts to promote female education Government have always encountered peculiar difficulties arising from the social customs of the people, particularly the early age for marriage among Hindus, but they have acted on the view that through the education of women a greater proportionate impulse is imparted to the educational and moral tone of the people than by the education of men, and liberal treatment has been accorded for girls in respect of scholarships and fees. Efforts have also been made, not without success, to bring education, through the agency of governesses, within the reach of *purda* ladies, to increase the number of ladies on the inspecting staff, and to replace male by female teachers in Government and aided schools. The number of girls under instruction has risen from 446,282 in 1901–02 to 954,616 in 1911–12. But the total number still remains insignificant in proportion to the female population. The Government of India believe, however, that in certain areas there are indications of a swiftly growing demand for the more extensive education of girls. The immediate problem is one of social development; and the existing customs and ideas opposed to the education of girls will require different handling in different parts of India. The difficulty of obtaining competent schoolmistresses is felt acutely in many parts of the country.

	Number of Girls under Instruction.	
	1902.	1912.
In colleges	264	369
In special schools	2,812	26,369
In public general schools :—		
High stage	1,677	2,558
Middle stage	8,147	13,101
Upper primary stage	27,004	47,339
Lower primary stage	353,667	786,623
In private institutions :—		
Advanced	1,406	1,900
Elementary	51,121	75,722
Total (excl. Baluchistan)	446,098	953,981

Classification of Scholars according to Race or Creed.—The table below shows the distribution of scholars, according to race or creed, in 1912.

	Public Institutions.					Private Institutions.				
	Europeans and Anglo-Indians.	Hindus.		Muhammadans.	Others.	Europeans and Anglo-Indians.	Hindus.		Muhammadans.	Others.
		Brahmans.	Non-Brahmans.				Brahmans.	Non-Brahmans.		
Bengal*	*8,716*	*196,951*	*935,011*	*252,560*	*70,590*	—	*8,944*	*30,756*	*12,900*	*872*
Eastern Bengal and Assam	549	57,317	395,683	533,333	38,994	—	793	3,985	42,341	2,129
United Provinces	4,647	167,668	346,291	94,454	8,528	—	15,725	32,405	39,939	2,343
Punjab	2,558	30,095	114,714	121,119	47,681†	71	4,491	16,059	38,741	5,584†
North-West Frontier Province	1	735	8,619	16,089	39	—	90	807	8,531	—
Central Provinces and Berar	1,399	35,022	208,487	29,072	39,006	—	57	—	162	—
Burma	4,029	231	3,471	9,626	252,953	—	46	1,016	4,927	168,956
Coorg	2	228	5,269	199	505	—	27	569	6	6
Ajmer-Merwara	527	—	3,996‡	1,041	1,062	—	—	2,794‡	1,426	288
Baluchistan¶	*59*	—	*1,239*‡	*2,687*	*131*	—	—	—	—	—
Madras	7,469	144,947	792,005	103,538	104,927	—	8,239	74,843	42,658	1,439
Bombay	4,811	120,010	540,262	139,464	37,762	2	3,607	31,552	43,008	2,399
Total of above figures (excluding Baluchistan)	34,708	753,204	3,353,808	1,300,495	602,047	73	42,019	194,786	234,639	184,016
Total, 1902§	31,140	509,685	2,277,883	732,635	340,121	150	43,044	188,898	246,606	160,414

* Figures for 1911. † Mostly Sikhs, classed in 1902 with Hindus. ‡ Brahmans not separately shown.
§ Figures for Coorg are for 1903, details for 1902 not being available.
¶ Distribution between public and private schools not shown.

Among the classes included under the head "others" Indian Christian pupils (most numerous in Madras) increased during the decade from 132,000 to 197,000, and Buddhists (mostly in Burma) from 295,000 to 409,000. Parsi pupils (mostly in Bombay) numbered about 17,000 throughout. It may be noticed in passing that while among Europeans and Anglo-Indians the number of girls at schools is not far below the number of boys, the proportion is not much above 1 to 2 among Indian Christians and Parsis, who come next, and falls to about 1 to 5 or 6 for Brahmans and Buddhists, and to a rather lower ratio still for non-Brahmans and Muhammadans.

The education of the domiciled European and Anglo-Indian community has frequently been the subject of special consideration. Schemes of improvement are now being worked out in the light of the recommendations of a conference on the subject held in July 1912.

As regards the Muhammadan community, the decade witnessed a remarkable awakening on their part to the advantages of modern education. In the past, although the proportion of children under instruction among Muhammadans has been as high as among the rest of the community, a large proportion of the Muhammadan pupils have been taught in "Koran schools" or other indigenous elementary institutions, where the children learn by rote and often do not understand what they repeat, and of the remainder only a comparatively small proportion have advanced much beyond the primary stage. The total number of pupils under instruction in all classes of institutions, which between 1892 and 1902 increased only from 887,000 to 979,000, rose by 1912 to 1,562,000 —*i.e.*, by nearly 60 per cent. in the ten years. Still more remarkable has been the increase in Muhammadan pupils in higher institutions, the out-turn of Muhammadan graduates having in the same period increased by nearly 80 per cent. But while in primary institutions the number of Muhammadans has actually raised the proportion at school of all grades among the children of that community to a figure slightly in excess of the average proportion for children of all races and creeds in India, in the matter of higher education their numbers remain well below that proportion notwithstanding the large relative increase. The facilities offered to Muhammadans vary in different provinces, but generally take the form of special institutions such as *madrassas*, hostels, scholarships, and special inspectors. The introduction of simple vernacular courses into *maktabs* has gone far to spread elementary education amongst Muhammadans in certain parts of India. The whole question of Muhammadan education, which was specially treated by the Commission of 1882, is receiving the attention of the Government of India.

It may be noticed here that during the decade the total number of scholars learning English rose from 495,000 to 705,000, the number learning a classical language from 633,000 to 884,000, and the number learning a vernacular language from 4,116,000 to 6,476,000.

(Education.)

Moral and Physical Training, Hostels, &c.—The question of religious and moral instruction has been much discussed in recent years. The Government of India desire to place the formation of the character of the scholars and undergraduates under tuition in the forefront of their policy, and much attention has been given both to direct religious and moral instruction and to indirect agencies, such as monitorial and similar systems, tone, social life, traditions, discipline, the betterment of environment, hygiene, physical culture, and organised recreation.

The question of religious and moral instruction was discussed at a local conference held in Bombay and subsequently at the Imperial Conference held in Allahabad in February 1911. Grave differences of opinion emerged as to the possibility or advantage of introducing direct religious instruction into schools generally, and apprehensions of difficulty in the working of any definite system were put forward. Doubts were also expressed as to the efficacy of direct moral instruction when divorced from religious sanctions. In the matter of moral teaching, however, the difficulties are undoubtedly less than in the case of religious teaching. The papers laid before the Conference indicate that not a little moral instruction is already given in the ordinary text-books and in other ways. The Government of Bombay are engaged upon the preparation of a book containing moral illustrations, which will be placed in the hands of teachers in order to assist them in imparting moral instruction. Excellent materials for ethical teaching are available in the Mahabharata, the Ramayana, portions of Hafiz, Sadi, Maulana Rumi and other classics in Sanskrit, Arabic, Persian, and Pali. The Government of India, while bound to maintain a position of complete neutrality in matters of religion, observe that the most thoughtful minds in India lament the tendency of existing systems of education to develope the intellectual at the expense of the moral and religious faculties. In September 1911 they invited local Governments, other than the Bombay Government, to assemble local committees in order to consider the whole question. Such committees are still at work in some provinces. For the present the Government of India must be content to watch experiments and keep the matter prominently in view. Enlightened opinion and accumulated experience will, it is hoped, provide a practical solution.

Among the "indirect agencies" referred to above hostels may be given a prominent place. There has been real progress of late years in the provision of hostels, as the figures in the margin show. The Government of India desire to see the hostel system develope until there is adequate residential accommodation attached to every college and secondary school in India. But a hostel of itself will not achieve the desired end unless effective means are adopted for guiding students and assisting them in their work and in their recreation. Already in some first-class institutions in the country admirable arrangements have been made on European lines to secure the full benefits of the residential system. Traditions are growing up, meetings of old boys are held, and debating and literary societies are becoming more common. All these require help which will in many cases best be organised in connexion with the hostel system. Much has also been done of late to improve school buildings; but a large number of thoroughly unsuitable, not to say mean, squalid, and insanitary buildings still exist in India. These will be replaced, as funds permit, by modern buildings designed upon sanitary lines and with a view to avoid overcrowding and to facilitate the maintenance of discipline.

	1901–02.		1911–12.	
	Hostels.	Boarders.	Hostels.	Boarders.
Bengal	316	11,341	*687**	*22,006**
Eastern Bengal and Assam†	57	852	283	6,890
United Provinces	311	9,086	632	20,745
Punjab	303	10,257	373	18,430
N.W. Frontier Province	21	346	29	690
Central Provs. and Berar	54	1,299	77	2,535
Burma	83	4,120	194	8,517
Coorg	1	63	4	187
Bombay	95	7,189	172	9,595
Madras	178	10,720	321	15,227
Total	1,419	55,273	2,772	104,822

* Figures for 1910–11. † Assam only in 1901–2.

The claims of hygiene are receiving special consideration not only in the interests of the children themselves, but also from the point of view of providing an object lesson to the rising generation. Hitherto want of funds and the apathy of the people have been responsible for the comparatively small attention paid to hygiene. In some provinces a simple course of instruction in hygiene is prescribed, at some period of the school course, but the lessons are often of too formal a type, are not connected with the life of the pupil, and fail to form his habits or to enlist his intelligence in after-life

in the struggle against disease. In some areas there is a general inspection of school premises by a medical authority; but it is believed that little is done for the individual inspection of school children and that medical advice has not always been enlisted in regard to the length of the school day, the framing of curricula, and such matters. The Government of India have commended to local Governments a thorough inquiry, by a small committee of experts, medical and educational, into school and college hygiene and the courses of instruction in the subject.

Fees and Scholarships.—The fees charged by colleges and schools in India vary greatly according to provinces and class of management, but are in all cases low. The statistical tables appended to the last quinquennial review of the Progress of Education in India showed that the average annual fee per pupil in 1906–07 was in boys' primary schools 1*s.* 2*d.*, in middle English schools and high schools (excluding European schools) 9*s.* 5*d.* and £1 2*s.* 1*d.* respectively, and in Arts colleges a little over £4. A return prepared in 1911 showed the actual rates as varying between £2 16*s.* 0*d.* and £9 12*s.* 0*d.* a year in Arts colleges, and between £3 6*s.* 8*d.* and £12 a year in Law colleges. In schools the fees vary greatly in different classes. In English secondary schools the rates in the highest classes rise in a few cases as high as £6 a year, falling on the other hand, in some cases, as low as 1*s.* a year in the lowest classes. In middle vernacular schools the highest rate shown is a little over 10*s.* a year, and this is exceptional. In primary schools the fees rarely rise above 8*s.* a year, and are generally much lower. In the case of primary schools, extensive provision is made, as has already been mentioned, for the admission of pupils free of charge. It was laid down as a general rule, on the report of the Education Commission of 1882, that private effort should be systematically encouraged by co-operation in raising fees, so that less and less aid might be required from public funds. But this instruction has not been systematically followed; in some cases fees have fallen rather than risen, and the failure to impose a reasonable minimum fee has sometimes led to loss of efficiency, the employment of ill-qualified instructors, and undesirable competition between rival institutions. The standard rates of fees have during the last few years been raised in some provinces, in view of the increasing cost of higher education and the growing demand for efficiency.

A system of State scholarships has long played an important part in public instruction in India, and the figures given below show that the total expenditure on scholarships is considerable. It is now possible for a boy to pass from the village school to the university by a graduated series of State scholarships. Reference may be made here also to the Indian Government Scholarships granted (two every year) to Indian graduates, in order to allow them to pursue their studies at a British university, and the State Technical Scholarships, of which some account has already been given, may again be mentioned.

Expenditure.—The funds devoted to education are derived from various sources. More than a half of the total expenditure is at present met by Government, or by municipalities or local boards, and something over a quarter from fees. Subscriptions, endowments, and miscellaneous receipts provide the balance. The rapid progress of the total expenditure from all sources is shown by the following table. The figures are for "public" institutions only:—

——	1901–02.	1902–03.	1903–04.	1904–05.	1905–06.	1906–07.	1907–08.	1908–09.	1909–10.	1910–11.	1911–12.
	£	£	£	£	£	£	£	£	£	£	£
Bengal	816,698	903,119	924,361	919,304	735,023	777,565	837,082	963,854	1,005,912	1,071,416	1,146,829
Eastern Bengal and Assam*	50,874	53,415	64,359	69,761	318,789	341,605	388,569	442,298	439,601	467,017	536,424
United Provinces	303,962	339,096	347,651	382,022	441,421	499,305	491,724	563,496	621,508	622,615	719,523
Punjab	216,922	250,933	274,447	289,174	331,038	346,459	375,742	370,619	389,559	403,804	457,661
North-West Frontier Province	10,198	10,844	12,726	13,250	14,169	15,850	17,973	21,275	20,803	25,891	28,567
Central Provinces and Berar	105,798	121,517	122,632	128,663	149,292	149,871	165,053	193,047	192,790	205,697	217,696
Burma	119,711	151,600	159,382	178,557	218,459	232,482	262,106	262,119	284,735	290,839	315,776
Coorg	2,665	2,786	2,649	2,946	3,191	3,278	3,412	3,532	4,054	6,102	4,857
Ajmer-Merwara	5,634	5,936	7,344	7,102	7,129	7,296	8,194	7,717	9,684	10,358	11,415
Baluchistan	1,899	2,110	1,858	1,991	2,885	2,563	2,811	3,998	4,355	4,594	5,300
Madras	528,813	584,936	594,086	595,341	624,602	650,957	712,740	782,728	795,952	851,167	904,340
Bombay	518,498	547,785	571,429	622,885	685,444	709,539	756,169	786,868	823,486	826,674	907,335
Total	2,681,670	2,974,077	3,082,925	3,210,997	3,531,443	3,736,770	4,021,575	4,401,551	4,592,437	4,806,172	5,256,223

* Figures from 1901-02 to 1904-05 are for Assam alone.

(Education.)

The total expenditure was nearly doubled during the decade, and all provinces shared in the increase.

Total Expenditure from	1901–02.*		1911–12.	
	Amount.	Per-centage.	Amount.	Per-centage.
	£		£	
Provincial revenues	679,669	25·4	1,803,025	34·3
Local funds - -	392,863	14·7	706,471	13·4
Municipal funds -	103,451	3·8	201,015	3·8
Total public funds -	1,175,983	43·9	2,710,511	51·5
Fees - - -	846,805	31·7	1,463,553	27·9
All other sources -	648,924	24·3	1,082,159	20·6
Total - -	2,671,712	100	5,256,223	100

* Excluding Baluchistan, for which full details are not available, and also expenditure of £8,059 on reformatories.

The proportions in which the total expenditure was defrayed from public funds and other sources in 1901–02 and 1911–12 are shown by the figures in the margin.

The contribution from Government revenues shows by far the largest proportional increase. A number of special grants were made to provincial Governments by the Government of India during the decade.

In its first year a recurring grant of £267,000 a year was made for expenditure on education, and a temporary grant of £33,000 a year for the improvement of university education followed, as has already been mentioned, in 1904.

In 1905 a further permanent grant of £233,000 a year was made for expenditure on primary education, and in the following year £33,000 a year was similarly granted for technical education and the education of Europeans and Anglo-Indians.

In 1911 a grant of over £600,000 was made from the opium surplus of 1910–11 for non-recurring expenditure on buildings and equipment, hostels, &c. Later in the same year it was announced at the Delhi Durbar that the Government of India, in view of "the predominant claims of educational advancement on the resources of the Indian Empire," proposed to devote at once £333,000 to "the promotion of truly popular education," and that it was their intention to add further grants in future years on a generous scale. It was subsequently decided to add to this grant a further recurring grant of £67,000, and to supplement it by a non-recurring grant of £433,000. The total new provision for the year 1912–13 was thus raised to £833,000.

	1901–02.		1911–12.	
	Amount.	Per-centage.	Amount.	Per-centage.
Direct expenditure :—	£		£	
University education -	255,192	9·5	471,620	9·0
School education, general :				
Secondary schools - -	847,337	31·6	1,392,269	26·5
Primary schools - -	792,898	29·6	1,383,154	26·3
School education, special -	151,422	5·7	358,506	6·9
Indirect expenditure :—				
Buildings - - -	149,688	5·6	553,788	10·5
Furniture and apparatus -	21,961	·8	96,121	1·8
University - - -	51,503	1·9	105,925	2·0
Direction - - -	26,147	1·0	45,937	·9
Inspection - - -	143,858	5·4	272,772	5·2
Scholarships - - -	61,030	2·3	89,555	1·7
Miscellaneous - - -	178,734	6·7	481,274	9·2
Total - - -	2,679,771	100	5,250,922	100

It does not fall within the province of this Statement to refer in detail to the distribution of these grants, or to the even larger grants announced in 1913; but it may be mentioned that the statement of policy contained in the Resolution of the 21st February 1913 was emphasised by the announcement of a recurring grant of £367,000 a year and a non-recurring grant of £2,127,000 from the surplus of 1912–13.

The distribution of the expenditure on education at the beginning and end of the decade is shown in the margin, expenditure in Baluchistan being excluded.

The approximate average annual cost of educating each pupil in the different classes of schools and colleges during 1911–12 was as follows :—

	Cost met from Provincial Revenues.	Cost met from Local and Municipal Funds.	Cost met from Fees and other Sources.	Total Cost.
	£ s. d.	s. d.	£ s. d.	£ s. d.
Arts colleges	4 2 6	2 9	7 0 11	11 6 2
Colleges for professional training	17 8 6	1 8	5 5 7	22 15 9
Secondary schools	0 6 6	2 10	1 2 2	1 11 6
Primary schools	0 1 3	2 3	0 2 3	0 5 10
Training schools	8 3 7	16 11	1 15 0	10 15 6
All other special schools	0 12 11	2 2	0 14 1	1 9 2
Cost per each pupil in all institutions	0 3 6	2 5	0 6 6	0 12 5

Management.—As has already been shown, more than three-quarters of the total number of schools and colleges in India are "public" institutions; but, taking them as a whole, only a comparatively small proportion are under direct public management, though the great majority of public institutions receive financial assistance from public funds. The classification of public institutions according to management is shown in the margin. There are marked differences between the different provinces. In Bombay, the Central Provinces, the Punjab, and the United Provinces, board schools predominate. In Madras, Bengal, and Burma, on the other hand, the great majority of schools are under private management, aided schools constituting more than a half —in Burma 98 per cent.—of the total number of public institutions. The schools managed by Government derive almost the whole of their income from Government revenues (which contribute about four-fifths) and fees; those managed by local boards also receive very little in the way of private subscriptions and endowments, but the contributions from local funds are supplemented by substantial contributions from Government. Aided schools derive rather more than a third of their income from fees, less than a third from subscriptions and endowments, and the balance from Government or local revenues. The unaided schools depend for more than half their revenue on fees. The Government-managed institutions, though their number is small, include nearly a third of the total number of colleges and about one-twelfth of the "special" schools, and the total direct expenditure on them is about the same as that on the institutions managed by local boards. The total expenditure on the aided schools is about twice that on Government-managed institutions.

	1902.		1912.	
	Number of Institutions.	Number of Scholars on the Rolls.	Number of Institutions.	Number of Scholars on the Rolls.
Under public management :—				
Managed by Government	1,078	96,780	2,085	192,238
Managed by local fund and municipal boards	18,080	981,635	29,284	1,833,935
Maintained by native states	3,630	164,512	3,370	219,295
Under private management :—				
Aided by Government or by local fund or municipal boards	62,922	2,134,247	82,489	3,239,826
Unaided	19,671	514,239	19,256	652,649

The Educational Services.—In a system of public instruction in which the management of schools and colleges is left largely to local and private agency assisted by state contributions, the adequacy of the arrangements for inspection and control is a matter of the first importance. The main controlling agency is the Education Department maintained by each local Government, which, in addition to providing inspectors, furnishes the professors and teachers for the Government schools and colleges. The department is divided into the Indian, Provincial, and Subordinate Services. The Indian Educational Service is recruited mainly from among graduates of the universities of the United Kingdom; the Provincial and Subordinate Services are recruited in India. The strength of the Educational Services was greatly increased during the period under review, the increase in the case of the Indian Educational Service being from about 100 officers in 1902 to about 180 in 1912. Each of the

(Education.)

larger provinces has its own Director of Public Instruction. Throughout the greater part of the decade the Home Department of the Government of India, on which fell the duty of supervising and co-ordinating educational effort throughout the country, was assisted by a Director-General of Education. The constitution of a separate Education Department of the Government of India, and the abolition of the post of Director-General of Education, were referred to at the beginning of this chapter.

Indian Students in England.—Important steps have been taken in recent years with a view to ameliorating the position of Indian students in this country. It had been frequently brought to notice that a large proportion of the Indian students who arrived in this country experienced difficulties by reason of their lack of information as to educational facilities and social conditions. With a view to making available for their use information and advice of the kind required, it was decided in 1909 to establish a Bureau of Information and an Advisory Committee. The head of the bureau, styled the Educational Adviser to Indian Students, is also a member of the Advisory Committee, which is composed of well-known Indians and Anglo-Indians. The functions of the bureau are to answer inquiries regarding educational facilities, to keep a list of lodgings and boarding-houses suitable for Indian students, to furnish students with references, and generally to give all possible assistance to students in this country and to their parents in India. Local committees have been appointed in the various provinces in India to co-operate with the Educational Adviser. The Advisory Committee was designed to stand, so far as possible, *in loco parentis* to students whose parents are unable themselves to supervise their education, and in particular to assist students in social matters. In 1912 the success of the steps previously taken was felt to justify a further development. The care of the interests of students all over the country having been found too heavy a task to be undertaken by a single officer in London, it was decided to take gradual steps in the direction of decentralising the work by appointing local advisers at important educational centres at which there are Indian students. At the same time, with a view to providing a central administrative authority who should be responsible for the general working of the whole scheme, an officer was added to the establishment of the Secretary of State at the India Office with the title of Secretary for Indian Students.

Literature and the Press.

The growth of journalistic and literary activity in India is a subject intimately connected with the development of the educational system, but one which cannot be dealt with at length here. The annual output of newspapers, periodicals, pamphlets, and books is very considerable in quantity; and, though much of the work produced is unimportant, modern India has given birth to able journalists and authors. During the period under review the total number of presses at work in British India rose from 2,253 to 2,781, and the annual out-turn of books from 7,811 to 11,584. The number of newspapers published, after rising from 708 in 1901–02 to 753 in 1907–08, fell to 659 in 1911–12. Periodicals, other than newspapers, increased from 662 to 2,269, but a large part of the increase was apparent only, being due to a change in classification.

The number of books published in Indian languages, vernacular or classical, was throughout the decade five or six times as great as the number published in English or other European languages, though more are published in English than in any single Indian language. As between the different provinces, Bengal produces the largest number of books, and Bombay and the United Provinces the largest numbers of newspapers. Among the subjects dealt with in books, religion takes the first place, considerably ahead of poetry and the drama and language. Fiction, law, history and biography, medicine, mathematics and mechanics, and philosophy follow with much smaller totals.

It is not proposed to attempt here a review of the literary activities of the first nine years of the decade; but before proceeding to refer very briefly to the publications of 1911, mention must be made of the legislation undertaken in 1908 and 1910 with a view to putting a stop to abuses of the liberty of the press such as had become frequent in a certain class of Indian publications.

The Newspapers (Incitements to Offences) Act, 1908, was passed in view of the close connexion between the perpetration of outrages by means of explosives and the publication of criminal incitements in certain newspapers, experience having shown

that prosecution under the previously existing law was inadequate to prevent the publication of such incitements, the real authors of which were often able to conceal their identity.

The Act deals only with incitements to murder, to offences under the Explosive Substances Act, 1908, and to acts of violence. It gives power in such cases to confiscate the printing press used in the production of the newspaper, and to stop the lawful issue of the newspaper. The procedure adopted in the Act follows the general lines of that provided in the Code of Criminal Procedure for dealing with public nuisances, with the important addition that the final order of the magistrate directing the forfeiture of the press is appealable to the High Court within 15 days. It is further provided that no action can be taken against a press save on the application of a local Government. When an order of forfeiture has been made by the magistrate, but only in that case, the local Government is empowered to annul the declaration made by the printer and publisher of the newspaper under the Press and Registration of Books Act, 1867, and thereafter neither that newspaper nor any other which is the same in substance can be published without a breach of the law.

The text of the Act was laid before Parliament [Cd. 4152 of 1908].

The Indian Press Act, 1910, was a measure of wider scope, the main object of which was to ensure that the Indian press generally should be kept within the limits of legitimate discussion. The continuance of murderous outrages had shown that the measures taken to deal with anarchy and sedition required strengthening, and that the real source of the evil had not as yet been touched. In spite of a steady enforcement of the ordinary law against sedition, there had been no permanent improvement in the tone of the press, a certain section of which had continued, both by openly seditious writing and by suggestion and veiled incitement, to inculcate hostility to British rule. There was no lack of evidence as to the connexion between these influences, to which the authors of the outrages in question—young men of the educated middle class—were peculiarly susceptible, and the actual commission of crime.

The Act, and the proceedings of the Legislative Council relating thereto, were laid before Parliament [Cd. 5269 of 1910].

The Act deals, not only with incitements to murder and acts of violence, but also with other specified classes of published matter, including any words or signs tending to seduce soldiers or sailors from their allegiance or duty, to bring into hatred or contempt the British Government, any Native Prince, or any section of His Majesty's subjects in India, or to intimidate public servants or private individuals.

The different sections of the Act have in view (i) control over presses and means of publication; (ii) control over publishers of newspapers; (iii) control over the importation into British India and the transmission by the post of objectionable matter; (iv) the suppression of seditious or objectionable newspapers, books, or other documents wherever found.

As regards the first of these objects, it is laid down that proprietors of printing presses making a declaration for the first time under section 4 of the Press and Registration of Books Act, 1867, shall give security, which may, however, be dispensed with by the magistrate at his discretion; that the proprietors of presses established before the passing of the Act may similarly be required to give security if and when they are guilty of printing objectionable matter of the description to which the Act applies; and that, where security has been deposited, local Governments may declare such security forfeit where it appears to them that the press has been used for printing or publishing such objectionable matter. When the initial security so deposited has thus been forfeited, the deposit of further security in a larger sum is required before a fresh declaration can be made under section 4 of the Press and Registration of Books Act, and if thereafter the press is again used for printing or publishing objectionable matter the further security deposited and the press itself may be declared forfeit.

Control over publishers of newspapers, the second main object of the Act, is provided for in a similar manner. The keeping of a printing press and the publishing of a newspaper without depositing security when required are punishable with the penalties prescribed for failure to make the declarations required by sections 4 and 5 of the Press and Registration of Books Act, 1867.

Other provisions deal with the cases of books or pamphlets printed out of India or secretly in India. The more efficient control over the importation and transmission

(Literature and the Press.)

by post of objectionable matter of the kind described in the Act is given by empowering the customs and post office authorities to detain and examine packages suspected of containing such matter, and to submit them for the orders of the local Government.

The fourth object of the Act is attained by authorising the local Government to declare forfeit any newspaper, book, or other document which appears to it to contain matter of the prohibited description, and upon such a declaration the Act empowers the police to seize such articles and to search for the same.

In any case in which an order of forfeiture is passed by the local Government, an application may be made to the High Court on the question of fact whether the matter objected to is, or is not, of the nature described in the Act.

The working of the Press Act has been satisfactory. The tone of the newspaper press in reference to politics has much improved. The growth of political literature has to some extent been checked, but the Act has not interfered detrimentally with the general literary output of the country. For the most part the object of the Act has been secured, as regards the local press, without recourse to the power of confiscating security. In many cases a preliminary warning to an offending newspaper, without the issue of a notice demanding security, has had the desired effect. In other cases, where security has been demanded, the offending paper has not furnished it, and has consequently ceased to exist. The existence of the powers conferred by the Act has thus kept the press within proper bounds, without the necessity arising for their frequent exercise.

Reports for 1911.—*Bengal.*—On the whole, the literature of the year was poor in quality, and the increase in the out-turn of vernacular literature that had marked the three preceding years was not maintained. Many original and readable biographies were published, but there were few really good works of fiction. As usual the output of religious literature was not only the largest, but also the most varied in character. Books of travel are becoming increasingly popular. The tone of the Indian press showed further improvement, and a spirit of moderation in the discussion of public questions was manifest in the writings of the leading vernacular papers—a result probably due in some measure to the suppression of one paper under the operation of the Press Act in the early part of the year. The Act was worked with considerable restraint and moderation; three leaflets and a pamphlet were forfeited; security was demanded in four cases, and warnings issued in six, and ten books, principally dramas, were surrendered. There was a noticeable expansion of the Muhammadan press, and an increase in the cleavage between the Indian papers in Calcutta and the English papers.

Assam.—With an exception here and there, the tone of the press was unobjectionable. The returns of publications bear witness, in respect both of the number and the nature of the latter, to the general backwardness of the province.

United Provinces.—The literary output showed a considerable and general decline, which was the less to be regretted as there was no improvement in its quality. Religious works were popular, but, except for one historical and one legal work, there was no publication of any kind with much claim to distinction. The tone of the press continued to improve, but the relations between the two religious parties showed no improvement. No prosecution under the Press Act was required, and only four editors were called on to find security.

Punjab.—Religion continued to be the dominating subject of indigenous literature. The circulation of Indian-owned papers continued small, though there has been a considerable rise in recent years. Altogether 248 newspapers were published during the year, the average total circulation of all papers together being 288,000. Some of the newspapers have reached a high level, and the proprietors of such papers recognise in an increasing degree their responsibilities to the public. This is still far from being the case with the less responsible vernacular productions, and during the year the bitterness of the religious controversy carried on necessitated the issue of a general warning by Government against the publication of articles calculated to foment sectarian animosity. No press prosecution took place during the year, but in certain cases it was found necessary to demand security from, and more frequently to issue warnings to, newspapers.

North-West Frontier Province.—Twenty-two presses were at work during the year, and two vernacular newspapers were published, neither having a large circulation.

Central Provinces and Berar.—The number of publications in 1911–12 was 162 as against 144 in 1910–11. Of these 49 were religious books. There were 31 newspapers and periodicals, only three of which could be said to have an appreciable influence on public opinion.

Burma.—The number of publications registered fell to 362, while 70 newspapers and periodicals were published. No features of special interest are reported.

Madras.—The number of books and periodicals registered continued to rise. The largest proportion dealt with religion. There was an increase in the number of newspapers and periodicals dealing with current politics. The tone of the press was generally loyal and moderate. No newspaper or periodical was called on to furnish security under the Press Act. Action was taken in respect of one Tamil paper published in French territory, which has since ceased publication.

Bombay.—The great activity displayed in the publishing business in 1910 was not maintained, and the number of books published materially declined. Only two books of a purely political character were published—a marked contrast to the state of affairs two or three years earlier. In 1909 there were 31 works dealing with politics. There was also a decline in the number of newspapers in circulation. The improvement in the general tone of the Indian press noticed in the preceding year was maintained.

(Prices.)

CHAPTER XXIII.

PRICES AND WAGES, MIGRATION AND EMIGRATION.

Prices.

Detailed information as to the prices of certain commodities in different parts of India for many years back is given in two annual official publications—"Prices and Wages in India," and "Variations in Indian Price Levels." A table showing the changes in the price of salt during the period under review has been given in an earlier chapter.* Further treatment of the subject here must be brief, and will be best confined to a consideration of some of the "index numbers" given in the last-named publication. The table below gives the available information as to Indian prices in the most generalised form, each index number being based on the prices of a number of different commodities at stations in various parts of India. In the last two columns are shown, for the purpose of comparison, Mr. F. J. Atkinson's index numbers for silver prices, and Mr. Sauerbeck's index numbers for gold prices, the latter being based on the London prices of a large number of commodities. In all cases the index number for the year 1873 is represented by 100. This year, which marked the beginning of the great change in the relative values of gold and silver, was also one in which the character of the seasons in India was generally normal.

Special and General Index Numbers of Prices in India compared with Atkinson's Index Number of Silver Prices in India and Sauerbeck's Index Number of Gold Prices in the United Kingdom, the two latter being equated to 100 for 1873.

Year.	Index Numbers of the Commercial Intelligence Department, India.				Atkinson's Index Number for Silver Prices.	Sauerbeck's Index Number for Gold Prices.
	Special Index Number for Food-grains (Retail Prices).	Special Index Number for Imported Articles.	Special Index Number for Articles exported and consumed.	General Index Number for the whole of the selected Articles.		
1902 -	141	86	113	106	128	62
1903 -	126	88	103	99	123	62
1904 -	117	93	104	101	121	63
1905 -	147	96	116	110	134	65
1906 -	179	105	139	129	158	69
1907 -	180	116	145	137	167	72
1908 -	231	106	151	138	180	66
1909 -	195	99	133	124	*	67
1910 -	168	109	127	122	*	70
1911 -	161	113	136	129	*	72

* Mr. Atkinson has discontinued his series since 1909.

The commodities taken into account are, in the first column, the 7 most important Indian food-grains; in the second, 11 imported articles, including iron, copper, cotton goods and yarn, sugar, silk, and kerosene; in the third, 28 articles, including cereals, tea, jute, oil-seeds, cotton, skins, and indigo. The price of each article in each year is expressed as a percentage of the price of that article for the base year 1873, and the composite index number for each year represents the simple average of the separate price-ratios. In the case of food-grains, the prices are retail, based on the averages of half-monthly prices recorded at 23 stations selected with a view to giving a fair indication of the general level of prices throughout India. In the other cases the prices are wholesale, generally the mean of two quotations in January and July at Calcutta or Bombay.

* Page 197.

(Prices.)

The fluctuations in the prices of food-grains are shown in more detail below :—

Variations in Average Annual Retail Prices of certain Food-grains at selected Stations.

	Rice.	Wheat.	Barley.	Jawar.	Bajra.	Ragi.	Gram.
1873	100	100	100	100	100	100	100
1902	165	142	127	131	131	156	132
1903	160	129	122	112	112	123	124
1904	147	123	103	108	107	124	107
1905	169	142	127	136	143	178	136
1906	209	155	154	172	173	225	168
1907	229	168	163	161	149	219	170
1908	254	226	218	218	204	242	252
1909	220	203	165	175	166	247	186
1910	198	170	133	158	156	218	140
1911	199	153	131	156	160	200	131
Actual average prices, 1911 (in *sers** per rupee).	9·9	11·9	20·6	16	14	15·2	18·2

* A *ser* is a little over 2 lbs.

The annual averages at the separate stations, on which the general averages quoted above are based, indicate a considerable range of local variation in prices. Thus in 1911 the retail prices per maund (82·3 lbs.) at the selected stations varied, in the case of rice, between Rs. 2·9 at Patna and Rs. 5·27† at Salem; in the case of wheat, between Rs. 2·76 at Amritsar and Rs. 5·1 at Bombay; in the case of *jawar*, between Rs. 1·9 at Cawnpore and Rs. 3·48 at Bombay; and in the case of gram, between Rs. 1·98 at Cawnpore and Fyzabad and Rs. 2·91 at Karachi.

The rise in the prices of commodities in India from 1905 onwards was the subject of much discussion, and engaged the attention of the Government of India, who decided in 1909 to place a selected officer, with assistants, on special duty to investigate the facts. He was directed to enquire with a view to ascertaining what had been the actual rise in prices in India during the past 15 years; whether the rise had affected all commodities alike or had been specially marked in the case of food-grains; whether there were marked differences in respect of enhancement of prices as between different areas; to what extent the rise might be attributed to "world factors" and to local conditions respectively; whether it appeared to be permanent or temporary; and, in the former case, what would be its probable economic effects on the country as a whole and on the different sections of the community. The results of the enquiry, which was begun early in 1910, are not yet available. In their absence, little need be said by way of comment on the series of index numbers given above. The short period fluctuations in the prices of food-grains depend mainly on the character of the seasons in India. The first years of the decade were years of recovery from the extremely high prices brought about by the failure of the crops in the famine year 1899–1900. A sharp rise in the prices of articles of Indian produce, especially food-grains, began in 1905, and was accentuated by the widespread failure of crops in Northern India in 1907–08. Good crops in 1909–10 brought prices down again. The spring crops of 1911 were on the whole good, and prices continued to fall; but the autumn crops suffered more or less from drought in Northern and Western India, and the price of rice showed an upward tendency, accentuated by strong export demand. Landholders whose land revenue assessments have been settled for long periods, and cultivators who hold land at fixed rentals, reap an advantage from high prices. It is probable that the trading classes benefited by the rise in prices, and there is reason to believe that owing to the enhanced demand for labour, due to industrial activity, the advance in wages has kept pace with the rise in prices in great industrial centres. The figures given below show that wages have risen also in rural areas. In the Punjab the rise in wages in recent years has been very marked. But where wage rates are more or less customary, or incomes more or less fixed, as in the case of pensioners, public and private employees, and the professional classes, the increased

† Equivalent to slightly over a penny a pound.

(Prices.)

cost of living is a serious matter. Extra allowances, known as grain compensation allowances, have been made on a large scale to Government servants to cover the cost of dearer food.

Wages.

The statistical data available do not enable an accurate comparison to be made between the rates of wages prevailing in India at the beginning and end of the decade. The return of Prices and Wages in India gives figures going back to 1873 purporting to show year by year for each province the average rates of wages for certain classes of workers, but the figures are admittedly very defective, and the returns on which they are based have now been discontinued. The rates given for 1901 and for the latest year shown in the returns are quoted in the table below, with a view only to giving a very rough indication of the level of wages and of the direction in which they tend to move. No great reliance can be placed on any of the figures taken separately.

Average Monthly Wages (in Rupees) of Skilled and Unskilled Labour.

	Able-bodied Agricultural Labourer.		Syce or Horse-keeper.		Common Mason, Carpenter, or Blacksmith.	
	1901.	Latest Figures.*	1901.	Latest Figures.*	1901.	Latest Figures.*
Burma - - -	13·7 to 14·8	14·7 to 15·7	12·1 to 13·4	14·6 to 15·3	27·7 to 31·4	31 to 33·3
Eastern Bengal and [Assam.	7·6 to 9·2	10·3 to 11·3	7·4 to 8·7	8·7 to 10	12·4 to 22·9	10·7 to 24·6
Bengal - - -	5·2 to 5·9	6·8 to 7·3	5·3 to 6·1	6·2 to 6·8	9·7 to 13·1	11·9 to 15·2
Agra - - -	3·9 to 4·4	4·5 to 4·8	4·6 to 5·1	4·8 to 5·2	8·8 to 10·1	9 to 9·6
Oudh - - -	3·6	3 to 3·9	4	4·3	6·8 to 7·4	7·7 to 8·4
Punjab and N.W. [Frontier Province.	7·2	11·3	6·7	8·7	18·9	27·5
Sind - - -	9 to 12	16	11 to 12·5	13·5	15·5 to 32·5	34 to 45
Bombay - -	7	9·6	8·7	9·7	18·1 to 23·7	20·2 to 25
Central Provinces -	4·2	5·7	5·7	7 to 7·7	11·7 to 12·4	22·5 to 26·7
Madras - - -	4·3	4·4	6·3	6·3	13·4 to 15·3	13·8 to 15·5

* The figures given in these columns are for 1911 in Bombay and Sind, 1910 in Burma and Eastern Bengal and Assam, 1909 in the Punjab, 1908 in the Central Provinces, 1907 in Madras and Bengal, and 1906 in Agra and Oudh.

By far the most important class of labour is agricultural, and the record obtained entirely fails to give a reliable indication of the remuneration of the labourers. This result is due to the inherent difficulties of the problem, and the practical impossibility of getting an untrained reporting agency to make the necessary allowances for the varying conditions of employment. Payment in kind is commonly practised, either for the entire wages, or as a supplement to cash wages, and the supplements vary according to the season and the nature of the employment. The regularity of employment also varies greatly, and employment is practically nowhere continuous throughout the year. The most common expedient for avoiding these and other difficulties is to return cash wages for labourers employed in towns or their neighbourhood, which are in no way typical of the rates prevailing throughout the district. The same difficulties are encountered also in collecting information as to the wages earned by village artisans, and the results are further vitiated by assuming that masons, carpenters, and blacksmiths necessarily earn the same wages. The wages of horse-keepers are recorded with the least inaccuracy, but even if they are taken as typical of the wages of domestic service generally, the class represented is unimportant.

Apart from the defects in the recorded rates, an average for a province is a very artificial figure, as wages vary greatly according to locality. The figures, for what they are worth, show a decided upward tendency, and are in this respect undoubtedly in accordance with the facts.

Measures are now being taken to replace the present faulty returns by others prepared on more scientific principles. The object of these will be to ascertain the standard rates of wages for different classes of workers in each district or homogeneous tract, and to observe permanent changes in those standard rates as distinct from short period fluctuations. The most important feature of the new measures is a regular wage census to be conducted once in five years. The first of these was to be taken in 1911, but the complete returns are not yet available, and in most cases no earlier figures compiled on similar lines are available for comparison. A few notes on some of the results so far reported may be added. In Madras a preliminary wage

census taken in 1908 showed that the average wages of unskilled labour were about 4 or 5 annas a day in towns, and 3 to 4 annas in rural tracts, an advance, according to the best information available, of from 33 to 50 per cent. on the rates prevailing twenty years earlier. The actual rates in different areas ranged between very wide limits. In Bombay a first census was taken in 1911. The prevailing rates of wages for agricultural labourers ranged for the most part between 3 and 5 annas a day, rates considerably higher being reported from Sind. The rates of wages both in town and country are reported to have risen by about 25 per cent. in the last five or ten years. In Bengal the census of 1911 showed the wages of rural unskilled labour as being in many districts in Bihar, Chota Nagpur, and Orissa between 2 and 3 annas a day. In the districts of Bengal proper the rates were higher, ranging up to 8 annas a day in a few cases. The returns from Eastern Bengal and Assam, also for 1911, but for a different month, show a considerably higher general level of wages for agricultural labourers, the average rates ranging from 5 annas a day upwards. In the Punjab a census taken in 1909 showed that the prevailing rates of wages of agricultural labourers were below 4 annas a day in only a few districts. In the Canal Colonies, where labour is nearly all imported and can dictate its own terms, the most common rates were 6 to 8 annas a day. In 1889 the usual wage for unskilled labour was about $2\frac{1}{2}$ annas a day, so that wages may be said to have doubled in the interval. The rates for skilled labour showed a similar increase. The advance in the rates of wages had been most marked during the five years preceding the date of the census, and was attributed to the rise in prices, the heavy mortality from plague among the labouring classes, and a much greater demand for labour, due largely to the extension of cultivation and the taking in hand of large irrigation works. In the United Provinces a first census was taken in 1906, so that comparison can be made over a period of five years. Generally speaking, the tendency of wages was distinctly upwards during this period, which was marked also by a further extension of the practice of paying wages in cash instead of in grain. The prevailing rates for unskilled labour in 1911 were in most districts from 2 to 3 annas a day.

Further information on the subject of prices and wages will be found in the last chapter of this Statement.

Internal Migration.

Speaking generally, the people of India are very disinclined to leave their homes, and the volume of movement to a distance is very small. At the census of 1901 less than 3 per cent. of the population were enumerated in provinces or states other than those in which they were born. Migration, largely temporary, takes place, however, on a considerable scale in various parts, as, for example, from the United Provinces and Bihar into Bengal for work in the mills and as field labourers, and from Madras and Chittagong into Burma, where, as in Bengal, few labourers are available locally. The establishment of modern industries and the extension of irrigation works are frequent causes of more or less permanent migration, while marriage customs, the harvesting of crops, and religious festivals and fairs are responsible for continual minor movements among the people. The only case of internal migration that calls for further notice here is that of labour immigration into Assam.

Labour Immigration into Assam.—There has hitherto been in force in Assam a system of indentured labour, which is now, however, on the point of extinction. The great tea industry of the province has created a demand for labour that the local supply—which is very limited, as the mass of the population of the province are above the necessity of working for wages—is wholly unable to satisfy, and the planters are thus forced to seek for coolies elsewhere. The total strength of the labour force engaged for employment on tea gardens, in the oil refinery at Digboi, in coal-mines, and in certain saw-mills, was at the end of the decade, including children, nearly 800,000, of whom only a small proportion—less than 5 per cent. of the adult force —were natives of the province. The immigrants come for the most part from Chota Nagpur, the Sonthal Parganas, and the plains districts of the United Provinces and Bengal.

During the past fifty or sixty years questions relating to the supply of labour for the tea industry in Assam, the condition of the labourers on the estates, and the enactment and working of special labour laws, have attracted much attention and have formed the subject of several detailed investigations by specially appointed committees. Some account of the events leading up to the passing of the Assam Labour and Emigration Act of 1901, which consolidated and amended the law, was given in the

(Internal Migration.)

last decennial number of this Statement. The Act remained in force throughout the period now under review; but its application was greatly restricted by successive steps, as noticed below, and one of its main features, the penal contract, was at the end of the decade within sight of abolition. The Act was amended in some points of detail in 1908.

The Assam labour system, where the Act of 1901 was applied in full, rested on the basis, on the one side, of a penal contract enforceable through the criminal courts; on the other side, of numerous provisions for the protection of the labourer. The importation of labourers is expensive, and the Act lays down that a labourer, provided that he is well treated, must not leave the garden to which he is indentured before the expiry of his contract, unless he chooses to redeem it by a money payment. Detailed provision is made by the Act also for the licensing and controlling of recruiting agencies, and for the transportation, accommodation, and treatment of labourers. Two main methods of recruitment are recognised, the first through contractors and recruiters in the recruiting districts, the second through garden *sardars*—persons employed on the estates and deputed by their employers to engage labourers. No labour contract may be made for a term exceeding four years, and minimum rates of wages (Rs. 5 per month for a man and Rs. 4 per month for a woman, rising after the first year) are laid down in the Act.

Labourers are engaged also, apart from the Act of 1901, under arrangements coming within the scope of the Workmen's Breach of Contract Act of 1859 and of section 492 of the Indian Penal Code, under which a labourer can be punished for breach of contract, but cannot afterwards be sent back to work on the garden.

The details of coolie immigration for each year of the decade are shown below. "Act" labourers are those indentured under the Act of 1901:—

Class of Labourers.	1902-03.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.	1910-11	1911-12.
Act { Sardári adults	7,988	5,031	4,196	5,482	3,060	4,890	1,123	515	616	664
Act { Contractor's adults	6,088	6,095	2,868	3,961	2,949	8,422	6,172	4,949	5,194	3,747
Non-Act adults	6,123	6,643	11,986	15,252	14,034	45,622	35,229	23,938	28,482	41,494
Total of Act and Non-Act adults.	20,199	17,769	19,050	24,695	20,043	58,934	42,524	29,307	34,292	45,905
Children	6,485	4,393	5,159	7,135	5,574	25,890	18,249	9,935	9,365	12,741
Grand total	26,684	22,162	24,209	31,830	25,617	84,824	60,773	39,332	43,657	58,646

The total figures for 1907–08 and 1908–09 were abnormal, owing to the prevalence of scarcity or famine in the recruiting districts. The increase since 1909 is attributed, as explained below, to other causes. The most noticeable feature of the detailed figures is the decrease in the number of "Act" labourers coinciding with a great increase in the number of "Non-Act" labourers.

In the early years of the decade the question of the labour supply for the tea gardens was again the subject of special consideration and inquiry. It was found that the situation in Assam compared unfavourably with that in the other tea-producing tracts in India, both in respect of the relations between employer and employed, and as regards the system of obtaining labour, and that service in Assam was markedly unpopular; also that the Act of 1901 was practically inoperative in the Surma Valley, where almost the whole of the labour force was recruited otherwise than under its provisions. In 1906 the whole question of the supply of labour was referred by the Government of India to a Committee, whose report, dealing fully with all aspects of the case, was published in the same year.

The Committee, though favourably impressed with the material condition of the labourers, the arrangements made for their comfort, and the reasonableness of the tasks, emphasised the fact that the local demand for labour was still largely in excess of the supply, and found reasons for this state of affairs in the abuses of the "free" emigration system, that had existed under the old Act of 1882, the penal contract, the great advance in industrial development in or near the recruiting districts, and the comparative lowness of the statutory wage in Assam.

The Government of India, in passing orders in 1908 on the report, remarked that the labour question was to be solved not so much by any modification of the law or rules as by concerted action on the part of the employers to offer attractions to

labour, and to ensure that conditions on the gardens were made popular with the labourers; that the industry must recognise the altered circumstances that had arisen in the districts from which it drew its labour, and must be prepared to meet these in a practical manner; and that there was already evidence of a movement towards the greater freedom of the labourer, and towards making his life on the gardens congenial. They expressed the hope that it might before long be possible to dispense with Government control, and to do away with the existing vexatious enactment governing the recruitment and management of labour.

Meanwhile it was decided to make certain changes in the application of the Act, among which may be noticed the formal withdrawal of the provisions relating to the labour districts from the Surma Valley, the withdrawal of the local contract—a measure intended to secure that every contract with an intending emigrant should be entered into in his own country—and the abolition of the right of private arrest of deserting labourers, the rigid enforcement of which in some cases had done much to contribute to the dislike of Assam in the recruiting districts. Important changes were made also in the details of the arrangements for recruitment, to facilitate which, and to allow of the continuance of control over recruitment for districts in which the penal contract was abolished, the Act was amended in 1908. Authority was given also to grant settlement of land on favourable terms to tea-garden managers for the purpose of settling their coolies.

The voluntary abstention on the part of many employers from having recourse to the Act of 1901 and the withdrawal of the right to enter into contracts locally have resulted in a steady replacement of "Act" or indentured by "non-Act" or "free" labour. The progress made by the end of the decade in this direction is shown by the figures in the margin, which give the composition of the total labour force in 1902 and 1912. The steady increase in the numbers of immigrants since 1909 appears to show that the greater freedom of labour conditions and the attraction of land for cultivation are having effect in the recruiting districts, and that the prejudice against Assam is being gradually removed. The labour districts provisions of the Act of 1901 were formally withdrawn from the Surma Valley, where, as remarked above, they had practically fallen out of use, in 1908. In 1911 the Government of India announced their intention of withdrawing these provisions also from the Brahmaputra Valley districts with effect from the 1st July 1913. When this withdrawal has been carried into effect, indentured labour will have ceased to exist within the limits of the Indian Empire. The indenture system dated back to the early days of the tea industry, when Assam was a little known country, and difficult of access. With the improvement of communications, the continuance of the system was held to have become unnecessary, either for the protection of the labourers or in the interests of the employers. The provisions of the Act regulating recruitment remain in force, but the question of abolishing the system of recruitment by contractors has been under consideration.

—		1902.	1912.
Adults :—			
"Act"	Men	56,590	7,923
	Women	52,271	6,356
"Non-Act"	Men	139,467	240,021
	Women	150,054	226,950
Children		246,376	310,212
Total		644,758	791,462

Nearly two-thirds of the labour force is employed in the Assam Valley, and the remainder in the Surma Valley. In 1911–12 the Act of 1859, which continued to be largely used, was reported to be working well on the whole. It was popular with employers, who could no longer place their labourers locally under contract under the Act of 1901, and also with coolies, as an agreement under it entails the giving of an advance, which is usually written off as a bonus. The successful working of the Act requires a certain amount of give and take, and its extensive employment, coupled with the fact that few complaints are made against its working, affords a striking and gratifying testimony to the good sense and good feelings that mark the relations between employers and employed in the tea districts. On most gardens no distinction in the matter of privileges is made between labourers under the Act of 1901 and coolies who have executed agreements under the Act of 1859.

The recorded birth-rate in 1911–12, calculated on the total strength of the coolie population, was 27·7 per mille; and the death-rate 26·5. As in previous years, mortality was greater among "Act" labourers than among "non-Act" coolies. The

number of gardens on the "unhealthy" list was 21 out of 737 on the register. Nine complaints of ill-treatment were made by coolies against their employers during the year; 984 cases were instituted by managers under the Act of 1859, in 103 of which the coolies were sent to prison. There were 10 cases of riot or unlawful assembly. The number of desertions of "Act" labourers reported was 1,885; there were 99 arrests, and 27 coolies were punished with imprisonment. At the close of the year the area of Government land settled direct with time-expired coolies was 185,404 acres, as compared with 96,993 acres in 1901. Ex-coolies also occupy large tracts as sub-tenants.

Papers relating to Excise administration in Assam, with special reference to the question of drunkenness on tea gardens, were presented to Parliament in 1904 [Cd. 2270]. The improvements effected since are referred to in the section dealing with Excise (page 210).

Emigration.

An account of emigration from and immigration into India in their wider aspects, as bearing on the question of population, will be supplied by the general census report, and need not be attempted here. It will suffice to mention that the census of 1901 fixed the number of foreigners (mostly Asiatics) in India at about 642,000, while the number of Indians resident outside India was estimated at 1,374,000. It is not proposed either to deal here with the general question of the immigration laws of British colonies and foreign countries, and the position of Indians resident therein. Numerous papers on the subject have been laid before Parliament in recent years. Mention may be made of a memorandum on the position of British Indians in the Dominions laid before the Imperial Conference of 1911 (*see* Cd. 5746–1 of 1911, pp. 272–279).

Regulated Emigration.—The only form of emigration that calls for detailed notice here is emigration "under an agreement to labour for hire in some country beyond "the limits of India other than the island of Ceylon or the Straits Settlements," which is strictly regulated by the Indian Emigration Act and the rules issued thereunder. The Act also provides for control over emigration in the case of Indians engaged to work as artisans, public entertainers, servants in restaurants, &c., and domestic servants. The Act of 1908, now in force, replaced the Act of 1883 and consolidated the law on the subject, without introducing any substantial changes. Under the Act, emigration coming within the terms of the above definition is allowed only from certain ports, and to a limited number of countries that have satisfied the Government of India that sufficient provision is made for the protection of emigrants during their residence therein. The countries to which emigration is now lawful include Trinidad, Fiji, Mauritius, Jamaica, British Guiana, and some other Crown Colonies, the Dutch colony of Surinam, and the Danish colony of St. Croix. Emigration to Natal ceased to be lawful with effect from the 1st July 1911, the Act having been amended in 1910 so as to give the Government of India power to discontinue emigration, not only on the specific grounds previously laid down, but in any case where they consider that sufficient grounds exist for taking that step. Emigration to the French colonies has been suspended for more than twenty years in consequence of complaints that adequate precautions were not taken for the proper treatment and repatriation of the immigrants. Indentured emigration to Mauritius has now ceased, and for many years past no indentured emigration has taken place to any territory outside the British Empire except Surinam.

Much detailed information as to indentured emigration will be found in the report of the recent Committee on Emigration from India to the Crown Colonies and Protectorates.* The system of indenture is one that imposes obligations and confers rights on both employer and labourer. On the one hand, it gives the employer a guarantee that labourers, brought from a great distance at considerable expense, will have to work and will not be tempted away by the offer of better wages or pleasanter conditions elsewhere; on the other hand, it secures to the labourer protection in recruitment, on the voyage, on arrival in the colony, and during the term of his indenture, with either a passage home, or substantial assistance towards it, after the expiration of a certain period (usually 10 years). The immigration law varies somewhat in the different colonies. It may be said generally that the employer is bound

* Cd. 5192, 5193, and 5194 of 1910.

to provide regular (but not excessive) work at fair wages, to house his men comfortably, and to provide efficient medical aid. The labourer, for his part, is bound to his employer for the period of the agreement (five years), and must reside on the plantation; he is bound to present himself regularly at work, provision being made for holidays and leave, and to do his allotted task. Penalties are laid down for breach of the provisions of the law on either side, and each colony has a Protector of Immigrants or Immigration Agent-General, whose duty it is to enforce the law in the interests of the immigrant.

The recruitment of labourers for emigration is hedged in with safeguards. Briefly, the arrangements are as follows:—Each country to which emigration is lawful may appoint an Emigration Agent at any port from which emigration is allowed, while the local Government, on the other hand, appoint a Protector of Emigrants at each such port, whose duty it is to see that the provisions of the Act are complied with, and to protect and aid with his advice all emigrants and returned emigrants. The actual work of recruitment is carried on, generally at a distance from the ports, by recruiters, who must be licensed by the Protector. The terms that the recruiter is authorised to offer are submitted to the Protector, and the recruiter has to give a true copy of the statement of terms to every person he invites to emigrate.

Every agreement to emigrate must be executed in the presence of a registering officer. The registering officer is required to examine the intending emigrant apart from the recruiter, in order to ascertain whether he is willing and competent to enter into the agreement to emigrate and understands its nature, or whether he has been induced to execute the agreement by any coercion or undue influence or mistake. Before embarkation the emigrants are kept in a depôt, in which they are examined as to their physical fitness to undertake a voyage. If the Protector finds that any emigrant is physically unfit, or that any irregularity has occurred in his recruitment or in his treatment, he may return him to the place of registration at the expense of the recruiter. Next comes the voyage to the colony. The Emigration Act and the rules framed under it make elaborate provision for the safety, comfort, and proper treatment of emigrants during the voyage. Emigrant ships have to be equipped and provisioned according to the scales laid down in the rules, and every such vessel has to provide a duly qualified medical officer. When the emigrant arrives in the colony of his destination, he is provided for by the law in force in that colony for the regulation of indentured immigration, in which connection it is to be remembered that emigration is permitted to no country unless the Government of India is satisfied that that country has made such laws and other provisions as are sufficient for the protection of emigrants during their stay therein. The Protectors of Immigrants appointed in the respective colonies are empowered to visit plantations, to require the production of emigrants, and to inquire into complaints made by the labourers. The Protector may cancel the indentures of immigrants if they are ill-used, or for any breach of contract on the part of the employer, or may institute an action in a Court on behalf of any labourer. Inspectors are also appointed to visit the estates at regular intervals to assist the Protector, and medical inspectors go round to inquire into the labourers' state of health, the sanitation of the plantations, &c. Lastly, grants of land may be made to emigrants who resign their right to repatriation and wish to settle in the colonies.

The Committee referred to above found it generally agreed that, though emigration is on too small a scale to have any very perceptible effect on the general interests of India, the advantages to the individual emigrant are unquestionably great; they expressed the view that, subject to certain recommendations in regard to individual colonies, the system of indentured immigration as actually worked was not open to serious objection in the interests of the immigrant labourer, and that, in the present condition of India, indentured emigration is the only practicable form of emigration to distant colonies on any considerable scale.

The figures of emigration during the first nine years of the decade given below include a certain number of persons who emigrated without coming under the operation of the Emigration Act, as, for instance, in the capacity of shop assistants or personal domestic servants. Of the total number who left, 99,020 were males and 42,169 females; the returned emigrants included 54,887 males and 18,415 females. Emigration is now allowed only from Calcutta, Madras, Bombay, and Karachi. The bulk of the emigrants in most years sail from Calcutta, the largest numbers coming from the United Provinces. Emigration from Madras during the period under review was

(Emigration.)

almost exclusively to Natal and Fiji, practically all of the emigrants being recruited within the Presidency. Emigration from Bombay and Karachi was on a very small scale, mostly to Mombasa for work under Government on the Uganda Railway.

—	Number of Emigrants who left India for										Number of Emigrants who returned to India.
	Mauritius.	Natal.	British Guiana.	Trinidad.	Dutch Guiana.	Fiji.	Jamaica.	Mombasa.	Other Destinations.	Total.	
1902–03 - -	2,571	6,140	1,968	2,341	657	840	663	173	60	15,413	12,757
1903–04 - -	510	4,601	2,937	2,449	—	2,988	—	25	155	13,665	11,673
1904–05 - -	2,067	9,456	1,348	1,844	249	836	—	97	42	15,939	6,341
1905–06 - -	720	8,108	2,737	3,164	175	4,066	1,647	448	60	21,125	6,945
1906–07 - -	619	10,049	2,337	2,514	1,270	3,261	—	861	92	21,003	8,197
1907–08 - -	587	6,664	1,830	1,868	1,918	1,137	606	383	124	15,117	6,774
1908–09 - -	—	1,722	1,797	2,447	2,435	2,908	416	80	39	11,844	7,918
1909–10 - -	—	2,935	2,515	2,480	478	1,947	1,117	53	119	11,644	6,909
1910–11 - -	533	6,257	2,173	3,259	—	1,898	816	127	376	15,439	5,788
1911–12 - -	Figures not available.										
Total (nine years), -	7,607	55,932	19,642	22,366	7,182	19,881	5,265	2,247	1,067	141,189	73,302
Total 1892–93 to 1901–02 - -	11,968	43,357	38,872	22,860	8,234	12,742	2,960	34,181	446	175,617	65,662

After the expiration of their terms of indenture, emigrants are free to take up other employment, and many of them settle in the colonies permanently, acquiring land or engaging in retail trading and miscellaneous occupations. The available evidence goes to show that the large majority of the immigrants who stay on in the colonies succeed in life, and attain to a much better position than they would have done by staying in India. The figures in the margin show the most recent figures available of the total resident Indian population (indentured and "free") in the chief labour-importing colonies, with their savings per head, so far as they can be ascertained. The figures of savings are necessarily incomplete, and they are not all comparable with one another. In all cases they include bank deposits and amounts remitted by immigrants to India, but the Fiji figures for savings banks represent only deposits made during the year, while in other cases the total amount held in deposit in the banks is shown. The figures for British Guiana, Mauritius, Jamaica, and Surinam include also the value of landed and other property in the possession of immigrants. Natives of India and their descendants now constitute 70 per cent. of the total population of Mauritius, and own landed property to the estimated value of £1,200,000. In regard to remittances made to India by money-order, the immigrant population in Natal stands easily first. The amount remitted from that colony in 1911 was nearly £70,000, or an average of about 12*s.* 6*d.* for every resident Indian. Remittances from Fiji averaged about 1*s.* 7*d.* per head; in other cases the average was less than a shilling a head.

—	Resident Indian Population, 1910.	Average Savings per Immigrant, 1910.
		£ s. d.
British Guiana -	132,984	2 4 6
Trinidad - -	107,433	1 3 10
Mauritius - -	259,975	5 18 8
Natal - - -	108,694	1 1 10
Fiji - - -	39,314	0 8 3
Jamaica - -	15,415	5 7 0
Surinam - -	27,358	1 5 9

The 4,350 emigrants (including 705 children) who left the colonies to return to Calcutta in 1911 brought with them savings of a total value of over £45,000, those from Fiji bringing nearly £22 per head; the savings of 1,973 emigrants who returned to Madras in 1911–12 were valued at £15,700. The emigrants returning to Madras included 37 from Réunion (where there remained at the end of 1911 some 2,800 Indians still under engagement), whose savings averaged less than £1 per head.

Non-regulated Emigration.—Emigration otherwise than under contract to labour, or to work in one of the capacities specified in the Emigration Act, is not controlled by legislation, and such emigration cannot be sharply distinguished from ordinary passenger traffic.

The total number of passengers leaving Indian ports in ships coming within the scope of the Native Passenger Ships Act rose from 1,519,000 in 1901–02 to 2,590,000

in 1910–11; but the great majority of the passengers—roughly 97 per cent. in the last few years—are carried on short voyages (lasting less than five days). Only about 11 per cent. travel to ports out of India, and these mostly go no further than Ceylon or the Straits Settlements. The bulk of the traffic is between ports within the same province. The improvement in wages for coolie labour in the Straits Settlements has attracted increasing numbers of emigrants from Madras in recent years, and large numbers leave Madras also for Ceylon, chiefly for employment on the tea plantations. Indentured immigration to the Straits Settlements and the Federated Malay States (which was not regulated by the Indian Emigration Act) has recently been abolished by the Colonial authorities. The migrations by sea from province to province are practically limited to voyages undertaken by coolies from Madras and Bengal to Burma for work as harvesters and in the rice-mills, and the return voyages of these coolies at the end of the working season.

In 1911–12 the number of passengers embarking for the Straits Settlements at Madras rose from 85,015 to 109,189; the number proceeding to Burma rose from 133,495 to 144,503, while passengers to Ceylon decreased from 177,181 to 135,539. The numbers of passengers returning from Ceylon, Burma, the Straits Settlements, and other parts, were respectively 115,703, 109,328, 51,268, and 17,052.

The figures given above do not include the numbers of pilgrims who leave year by year in pilgrim ships for the holy places in Arabia. The number fluctuates considerably, the average being roughly about 20,000 pilgrims a year.

(Bengal and Bihar and Orissa.)

CHAPTER XXIV.

CONDITION OF THE PEOPLE.

The foregoing chapters have dealt with the progress and condition of India during the decade under separate heads, and, to a large extent, from the points of view of the different departments of the administration. The welfare of the people has been kept as much as possible in the foreground of the picture, but the division of the subject, and the multiplicity of details, have stood in the way of a general appreciation of their progress and condition. The present chapter consists of notes prepared by the various local Governments* with a view to giving a general impression of the progress of the people, and of the direction and importance of economic and other changes, in each province.

Bengal and Bihar and Orissa.

The Results of the Census.—The population of Bengal has increased by a little over 11½ millions, or by 33½ per cent., since 1872, and now amounts to 46,305,642. In the last ten years there has been an increase of 3,423,866, or 8 per cent., which is shared in by all parts except Nadia and Jessore, two districts which suffer from persistent malaria, and which have no manufactures or organised industries to attract immigrants. The most progressive parts of the Presidency are East Bengal and North Bengal, which register a gain of 12 per cent. and 8 per cent. respectively. The least advance has been made by Central Bengal, where the proportional growth is 4½ per cent., and West Bengal, where it is a little under 3 per cent. The difference in the rate of progress in each natural division is largely explicable by the proportion of Mussulmans, who, as is now well known, are more prolific than Hindus. In Bihar and Orissa the population has increased by 1,878,036, or 5 per cent., since 1901, and aggregates 38,435,293. The rate of advance has been very uneven in different parts of the province. The Chota Nagpur Plateau has developed rapidly and is now more populous by 14 per cent. This tract is inhabited mostly by prolific aborigines, and elsewhere Hindus predominate. In North Bihar there has been a growth of only 2 per cent., while Orissa and South Bihar are practically stationary. In Orissa the combined effect of floods, scarcity, epidemics of disease, and emigration has been to reduce the percentage of increase to 1 per cent. In South Bihar, which has suffered from plague, and from which there is an even greater periodic exodus of labourers and poorer cultivators, the increase is still smaller. Plague has been almost an annual visitation in Bihar throughout the decade, causing a mortality of nearly half a million, and has levied heavy toll on the towns, most of which are now decadent —in 26 towns the loss directly due to plague deaths is 10 per cent. Apart from direct mortality, plague has had a serious effect on the commercial and industrial activities of the people, interrupting their even tenor and hindering their development.

Occupations.—In both provinces the great majority of the people are dependent on agriculture and cognate pursuits. In Bengal nearly 35½ million persons, or three-quarters of the population, are supported by pasture and agriculture. Of these, 29¾ millions are ordinary cultivators and their families, while 1,200,000 are maintained by income from agricultural land, and 3⅔ millions come under the head of farm servants and field labourers. The agricultural labourers are only slightly outnumbered by those who follow industrial pursuits. The aggregate of the latter is 3½ millions, or 8 per cent. of the population, of whom about one-fourth are maintained by textile industries. Trade accounts for 2⅓ millions, or 5 per cent., while those who come under the head "Transport" aggregate a little under 1 million, or 2 per cent. The latter are outnumbered slightly by "Labourers and workmen otherwise unspecified," who correspond to general labourers, their strength being 1,130,000. The predominance of pasture and agriculture is even more pronounced in Bihar and Orissa, where they form the means of subsistence of 31 million persons, or four-fifths of the total population. Cultivation is the means of livelihood of 30 millions, of whom 22 millions are cultivators, two-thirds of a million are rent-receivers, and 7¼ millions are farm servants and field labourers. The number of those supported by industries and

* Some of the notes prepared are reproduced in a somewhat abbreviated form, in view of considerations of space.

mining is nearly 3 millions, or 7½ per cent. of the population, while 1⅔ millions, or 4 per cent., subsist by trade, and less than 900,000 are general labourers. In Bengal nearly 450,000, or 1 per cent., and in Bihar and Orissa 200,000, or a half per cent., are dependent on unproductive occupations, such as begging, vagrancy, and prostitution.

General Conditions in the Decade.—The decade was a period of fair agricultural prosperity in Bengal; but in 1905 the eastern districts suffered from high floods, and in the next two years the general tendency to high prices was accentuated by a partial failure of the crops. In Bihar and Orissa climatic conditions were less favourable. Until 1904 fair crops were reaped, but then four lean years came, the harvests being short in many places and prices generally high. Floods followed by droughts caused a local famine in Darbhanga in 1906–07; and in 1908–09, before the district had fully recovered from its effects, a second famine was caused by drought. Famine also followed a failure of crops in a portion of Ranchi in 1907–08, and in a small area in the Puri district. A number of other districts suffered from scarcity, which in places almost approached famine; but the cultivators were enabled to tide over their difficulties with the help of loans, which were freely granted by Government. Such distress was most acute in Bankura and Nadia in Bengal, and in Muzaffarpur, Bhagalpur, the Sonthal Parganas, Cuttack and Balasore in Bihar and Orissa. The last three years of the decade were a period of revived prosperity, bumper crops being reaped, and the people were in comparatively easy circumstances.

Rise of Prices.—Perhaps the most noticeable feature of the economic history of the decade was the rise of prices, both of food-grains and other articles, which began in 1906 and continued throughout 1907 and 1908. The average price of food varied little from the normal in the early part of the decade; but in 1906 it suddenly rose, and the rise was accentuated in 1907, till the average price of rice was 58 per cent. and of maize 70 per cent. above the previous normal. The crops of 1907–08 being also short, there was no appreciable reduction next year in the price of these cereals, the first of which is the great food-staple of Bengal, while the latter is consumed largely in Bihar. The same phenomenon occurred in other parts of India, but in Bengal, Bihar, and Orissa there were several contributory factors. The food crops, and especially the rice crop, were short for four successive years. At the same time, the price of jute advanced, and the jute cultivators, obtaining unusually high prices for the fibre, extended the area under jute to the partial exclusion of rice. The shortage of the stocks of rice, combined with an increase in the buying powers of a large proportion of the cultivators, led to an unprecented demand for the grain; and the high prices which they could command induced those who had stores of rice to sell all that they could, keeping only the minimum required to carry them on till the next harvest.

Condition of Professional Classes.—The middle classes who subsist by professional or clerical employment were hard hit by the rise of prices. Being dependent on fixed salaries, the dearness of food either entailed a reduction in their standard of comfort, or reduced the margin between sufficiency and privation. The pressure of high prices on these classes was, indeed, so real as to oblige Government to institute a system of "grain compensation allowances" for clerks and other employés on low pay, in order to counteract, to some extent, the diminution of their assets which was its immediate result. This section of the community so far shows no very clear sign of any marked improvement in material condition. The economic development of the country has not kept pace with the educational progress of the people. An ever-growing number of youths are leaving the schools and the University, but fresh avenues of employment are few. Altogether, 580,000 persons have a knowledge of English in the two provinces of Bengal and Bihar and Orissa, the number having increased by over 200,000 since 1901; but a special census of industrial concerns employing 20 persons or more shows that the total number of Indians engaged in direction, supervision, and clerical work is only 20,000. The influence of tradition and custom, moreover, is still so strong as to deter many of the upper classes from adopting pursuits in which manual labour is necessary, or which are considered socially derogatory. Some of the more orthodox will not even invest money, much less engage, in trade, which they regard as a degrading pursuit. In spite, however, of the difficulties caused by rising prices, the decline in the purchasing power of the rupee, and keener competition, they do not reduce their expenditure on social and

(Bengal and Bihar and Orissa.)

other ceremonies, and they consequently find it more and more difficult to maintain their position. To this result the joint family system contributes, for it is apt to check enterprise and individualistic effort. Each member of the family is sure of support, and has not therefore the same incentive to strike out for himself as if he were independent. Drones are tolerated and feed on the fruits of the labour of others. On the other hand, the system of common property saves individual members from want, and is a relief to those earning small salaries.

Condition of the Cultivators.—The cultivators, being able to dispose of their produce at better prices, benefited by the rise. Apart, however, from this, there is a general consensus of opinion that they are in better circumstances than a generation ago. Much of their improvement is to be ascribed to the extension of railway communications and the ramifications of modern commerce, as a result of which prices are more uniform and produce is more easily disposed of. They are no longer tied by local prices, for agents of large firms now penetrate to places where organised commerce was formerly unheard of. Consequently, when abundant harvests are reaped, it does not follow that prices will run down suddenly, and the cultivator is free from the fear that he will find it impossible to dispose of surplus stocks. Fluctuations are less frequent and less abrupt, and the cultivator has therefore greater stability of position.

The ryot's status has been further improved by the survey and settlement proceedings, which have made the provisions of the Bengal Tenancy Act operative in many districts where they used to be more or less a dead letter. A record of rights has now been prepared for the whole of the Patna, Tirhut, and Bhagalpur Divisions except the district of Gaya, for all the Chota Nagpur districts except Palamau and part of Manbhum, and for the greater part of the Dacca Division. The recent amendment of the Bengal Tenancy Act and the enactment of the Chota Nagpur Tenancy Act have also given the tenantry greater security of tenure, and have done much to protect them against illegal and arbitrary enhancements of rent. Briefly, the cultivators are now protected against all but calamitous seasons and the consequences of their own improvidence by the even tenor of prices, security of tenure, and security of rent.

In Bihar and Chota Nagpur the cultivators have benefited, to a certain extent, by the extended cultivation of rice. Formerly they distributed their capital and labour between rice and other crops, such as oil-seeds, pulses, &c. Now, the good prices commanded by rice, and the facilities for export afforded by the railway, have led them to concentrate more completely on rice. This is, however, not an unmixed benefit, for rice is often grown on uplands imperfectly irrigated and unsuitable for its growth. The result is that areas which used to produce millets and maize, on which the people subsisted, have been turned into rice-lands of which the outturn is uncertain and precarious. Such cultivation is, in fact, speculative, the peasants abandoning the grains which form their daily food for the sake of the larger profits which rice yields.

In Bengal the cultivation of jute has proved more profitable; it is estimated that the crop of one year alone (1906) sold for over £26,000,000, of which more than £10,000,000 was clear profit. One district (Noakhali) is reported to have exported 400,000 maunds of jute in 1911, the prices obtained by the cultivators being at least £160,000. No small share of the large sums obtained by its cultivation has gone into the pockets of the Bengali cultivator, who also has other resources unknown to the peasantry of Bihar. In Backergunge, for example, it is estimated that the number of betel-nut trees is about 27 millions and that the annual outturn of nuts is 6,000 millions. In Noakhali, again, the produce of the betel-nut and cocoanut plantations is reported to bring £170,000 to £200,000 a year into the district. The standard of comfort generally attained is sufficient to raise the Bengali ryot well above the fear of indigence. Sons of middle-class cultivators commonly think it beneath their dignity to work in the fields like their fathers, and they can afford to employ imported labour for tasks regarded as menial or involving hard physical work.

The Bihari ryots are far poorer than their Bengali brethren, but the course of the last ten years has brought to light unexpected staying powers. It has not been necessary to declare famine anywhere except in Darbhanga and portions of two other districts, though prices have reached what would have been famine rates 30 years ago. The tenantry of Bihar were then described by the Lieutenant-Governor of Bengal as "poor, helpless, discontented men, bound down to a state of extreme

"depression and misery, tenants of the richest province of Bengal, yet the poorest "and most wretched class we find in the country." As pointed out in the last decennial memorandum, Sir A. P. (now Lord) Macdonnell, referring to the famine of 1873–74, stated that the ryots of Darbhanga and Muzaffarpur were so impoverished, and so unable to bear up against the failure of a single season's crop, that one-third of the population was at one period in receipt of relief from the Government. In the famine of 1896–97, however, when distress was at its greatest, the persons in receipt of relief formed less than 3½ per cent. of the population. The lapse of ten years has shown a further improvement, for in the Darbhanga famine of 1906–07 the percentage of persons relieved to the population of the distressed area was only one-third of what it was in the previous famine, while the proportion was still smaller in the famine of 1908–09.

The aboriginal of the Chota Nagpur Plateau is still as careless of the future, an increased income merely meaning increased opportunities for squandering. In Ranchi the famine of 1908–09 occurred less than two years after bumper crops had been reaped. There was a failure in other parts of the country, and the high prices obtainable led to large exports. Stocks were depleted, and the aboriginals saved nothing against bad times. In the Sonthal Parganas, again, the scarcity of 1908 was synchronous with an abnormal increase in the consumption of country spirit, the Sonthals obtained high prices for their lac, which they made haste to spend on drink.

Condition of Labourers.—The labouring classes were not much affected by the high level of prices. The great majority are field labourers, who are mostly paid in kind. Their wages remain the same, but the value of grain has risen. Where they are paid in cash, their wages have increased, notably in Bengal, where the supply of labour is frequently short of the demand. Those who are prepared to leave their homes for a time and obtain employment in the mills, factories, docks, and coal mines, or on the roads and railways, or in harvesting the crops of other districts, can obtain better wages than in their native villages. An ever-growing number of the landless labourers in Bihar and Orissa are taking advantage of the facilities afforded by the railway, leaving their homes in the cold weather, when there is but little work in the fields, and returning in time for the agricultural operations which begin with the breaking of the monsoon. Altogether 1¼ million inhabitants of this province, or one-thirtieth of its total population, were present in Bengal at the time of the census.

Migration.—Periodic migration of this kind is a factor of increasing importance in the economic condition of the two provinces. Its volume varies with the outturn of the crops. If bumper crops are reaped, it diminishes; if they are short, the exodus is largely increased and lasts longer. In 1908 no less than 50,000 persons left their homes in one subdivision of Cuttack, under the pressure of scarcity and high prices, to find employment elsewhere; and it is computed that in two months of the same year 70,000 persons moved from the south of the Bhagalpur district, where there had been a crop failure, in search of work in tracts where there was a demand for labour. Nowhere is the volume of emigration so great as in Bihar, from which year after year an increasing number go away during the slack season; at the census over a quarter of a million emigrants from the Tirhut and Patna Divisions were enumerated in Calcutta and the metropolitan districts alone. It is in this area that the mobility of labour affords the greatest relief, for the people are dependent on their crops, more especially on the precarious winter rice crop, and there are no large local industries to provide employment in lean years. The decline of the indigo industry has continued, the area under cultivation in the districts of Muzaffarpur, Darbhanga, and Saran decreasing in 10 years by 100,000 acres; and it may be estimated that 50,000 persons have had to find employment in other forms of labour. In Bihar, as a whole, the number of those dependent on agricultural labour for their subsistence is 4⅔ millions, or a fifth of the population. In addition to this, the holdings of a considerable proportion of the cultivators are so small that they are insufficient to support them, unless the family income is augmented by wages obtained in labouring for others; in Saran and Darbhanga alone the settlement shows a million landless labourers and petty cultivators of this class. For this large body the annual exodus to the centres of industry provides an outlet. The remittances they make to their families relieve the pressure of high prices, and the savings they bring home provide a reserve against hard times. Some idea of the way in which the purchasing power of a district is thus increased may be gained from the statistics of remittances by money-order, of which a large proportion represents money sent home by temporary

absentees. In the famine year of 1896-97 over £100,000 was paid by money-order in Muzaffarpur, a sum which was at that time considered abnormally large. It has since been more than doubled, the total value of the money-orders paid in the district during 1910, a year of good crops and general prosperity, being £227,000. The amount remitted by money-order in Saran is still greater, aggregating nearly £343,000 in the latter year; altogether £113,000, or one-third of the total, was paid in the first quarter of the year (when emigration is most active), the average amount of each order being £1.

Periodic emigration of this kind shows a progressive increase, owing to the extension of, and greater familiarity with, railway communications, and the resultant knowledge that immigrants can return to their homes without difficulty at any time when their presence is required by their families. In some parts the cold weather exodus of small cultivators and landless labourers is now such an established feature of the agricultural year, that, as remarked by the Collector of Saran, "having once "acquired the habit of emigrating for wages, and having found that it is easy to save "money in this way, the people now emigrate yearly as a matter of habit to supple-"ment their incomes, whether agricultural conditions are prosperous or the reverse."

Indebtedness.—Further light has been thrown on the indebtedness of the people of Bihar by the reports on the settlement operations in Saran and Darbhanga, two congested districts, where the question is of particular importance. The statistics do not show cases in which money is borrowed on security other than land; but such loans, being only for petty amounts, do not affect the consideration of the subject.

In neither district can the indebtedness of the peasantry be said to be a very serious matter. In Darbhanga only 6 per cent. of the raiyati holdings and 2½ per cent. of the raiyati area are affected, in whole or in part, by sales or mortgages with possession. The total amount of indebtedness incurred in this way is less than one-sixtieth of the share of the gross annual produce secured by the cultivating classes. In Saran it has been found that 5½ per cent. of the raiyati area is mortgaged, and that 15 per cent. of the holdings are affected, either in whole or in part, by mortgages on land. The total indebtedness of the agricultural community, as recorded by the Settlement Department, is a little more than one-tenth of the value of the gross outturn in an ordinary year. At the same time the indebtedness is borne by less than one-fifth of the whole body of ryots, and on them it must press heavily. Practically all the profits of their holdings are required for subsistence, so that there is little chance of the debt being paid off from the profits of cultivation alone. As a matter of fact, too, many of the ryots take no trouble to clear themselves of debt. The profits of a good year are made the excuse for increased expenditure on marriages and other ceremonies. A typical example of extravagance in expenditure on social ceremonies is quoted in another settlement report. A well-to-do cultivator died, leaving about £40 in cash and grain. His son squandered the whole of this large sum in entertaining several hundred guests at the *sraddha* ceremony, for each of whom 2½ seers of food were provided, or about twice the amount an ordinary person has the capacity to hold.

Co-operative Societies.—The enactment of the Co-operative Societies Act, which provides for the constitution and control of co-operative societies, marks a distinct advance in the attempt to provide a preventive against rural indebtedness. Though the movement is still in its infancy, it has already attained considerable popularity. In 1911-12 the number of societies had risen to 889, the roll of members to 45,246, and the capital to nearly £120,000. Sixty-four of these are urban societies, which have developed spontaneously, the members consisting of subordinates in Government service and employés of mercantile firms. There are 14 central societies, the object of which is to provide an agency for the control and financing of affiliated societies. The remainder are village societies, which are steadily becoming more effective institutions, financially stronger and better managed. The sum of members' deposits has risen to over £6,000, and the funds are employed to good purpose. More than a third is utilised for the repayment of debts, one-tenth for the purchase of cattle, while less than one-twenty-fifth is used for marriage expenses. Though the movement was initiated by Government, the object which has been steadily kept in view is to enlist the interest of the people themselves and make the societies self-sufficient. The basis of the movement is, in fact, true and effective co-operation, and not merely joint-stock banking.

Industrial Development.—The development of large industries, which was so marked a feature of the last decade, has continued. The expansion of coal-mining has been

little less than remarkable, for between 1903 and 1911 the output rose from under 6½ million tons to nearly 11½ million tons, or nine-tenths of the total production of India. In Bengal, which contains only the Raniganj field, the output in the latter year was a little less than four million tons, but in Bihar and Orissa, which contains the Jheria, Giridih, and other fields, it was over 7½ millions or more than half the total for India. The history of the industry was somewhat chequered, for there was a "boom," which culminated in 1908 and was followed by a "slump." The industry is, however, healthier than it was before the "boom," for the fever of wild speculation has abated and normal conditions have been restored. The jute industry has also continued to flourish; 24 more mills are at work, and the number of operatives has been nearly doubled. Jute mills now furnish employment to 200,000 persons; the wage bill amounts to £2,667,000, and the annual value of the products is £17,000,000 to £20,000,000. Cotton mills have increased from 10 to 15, and their operatives from 8,000 to nearly 11,000. Two notable additions to the list of manufacturing concerns are the Tata Iron and Steel Works in Singhbhum and the factory of the Peninsular Tobacco Company in Monghyr.

An exhaustive industrial survey of the two provinces has not yet been made; but some idea of the present state of organised industries and manufactures may be gathered from the results of the industrial census, held concurrently with the general census of 1911, by which statistics were obtained of concerns (such as mills, factories, mines, &c.) employing 20 hands or more, and of the number of their employés. In Bengal there are 1,466 such concerns employing 606,000 persons, of whom about two-fifths are skilled labourers. All but 4,000, or less than 1 per cent. of the total number, are Indians. The jute mills and presses are the largest employers of labour, requiring 214,000 hands, and then the tea gardens, in which 191,000 persons are at work; in other words, the jute and tea industries account for over half the labour force. The coal trade was dull at the time of the census, and the aggregate of workers was only 38,000. The number working in railway workshops is nearly 23,000, and in brick-fields and tile factories 22,000. Printing presses come next on the list, and then cotton mills and machinery and engineering works, each with about 12,000 hands. The province of Bihar and Orissa is still backward from an industrial point of view. for the total number of concerns is only 583, and of employés 180,000. The coal-mines account for over one-third of the former and for nearly half of the latter. The number of indigo plantations returned was 119, which furnish employment to a little over 30,000 persons. If coal-mines and indigo plantations are excluded, there are only 265 industrial and manufacturing concerns in the new province, with a labour force of 62,000. In Bengal, on the other hand, if the three principal industries of jute, tea, and coal are left out of account, there are over 900 concerns with 163,000 employés.

The Swadeshi Movement.—One of the bye-products of political ferment has been the revival of the swadeshi movement, which aimed at the exploitation of the resources of the country solely by, through, and for Indians. Those who took it up endeavoured to bring about the resuscitation of dead indigenous industries, the further development of such as had managed to hold their own in spite of competition, and the initiation of new forms of industrial enterprise. Interest in this movement was keen for a few years, but has now abated. While it was at its height, it did much to improve the position of those engaged in the cotton-weaving industry, quickening the demand for hand-woven fabrics and stimulating production. It further gave an impetus to indigenous industrial enterprise in other directions, and led to the establishment of small factories engaged in the manufacture of such articles as steel boxes, pencils, soap, perfumes, combs, and buttons. But little progress, however, was made in the organisation of large joint-stock enterprises, for, though several were started, the results were, on the whole, discouraging; some did not pay dividends, while others collapsed altogether. The more important industries and manufactures still continue to be supported mainly by British capital, and to be directed and managed by Europeans.

Assam.

General Conditions.—Before endeavouring to estimate the progress made along the path of material prosperity during the last decade, it is necessary to glance for a moment at the condition of the people at the commencement of that period. The closing years of the last century had not dealt kindly with the natives of the province.

(Assam.)

Lower and Central Assam had been appallingly unhealthy. At the census of 1901 it was calculated that the indigenous* population of Kamrup and Darrang had declined by 8 per cent., while the district of Nowgong showed a decrease of 31 per cent. amongst the indigenous inhabitants, and thus attained an evil pre-eminence amongst all the districts of British India, though many of them had been devastated by plague and famine, two scourges from which Assam was fortunately free. Cholera had been to some extent the cause of this terrible mortality, but it was chiefly due to *kala-azar*, that strange insidious fever which had slowly passed up the valley leaving behind it deserted villages and fields relapsing into jungle. Even a densely populated country would have found it difficult to recover from such a pestilence. But in Assam it is not land but labourers who have always been to seek, and *kala-azar* had a peculiarly deplorable effect upon the peasants. It killed almost invariably, but seldom in less than three months, more often in two years, and the little savings of the villagers were spent upon their sick. Those who survived had scarcely heart to begin life again.

In Sibsagar and Lakhimpur there was a substantial increase amongst the indigenous population, but in Goalpara, the Khasi and Jaintia Hills, and the great district of Sylhet, which contained more than a third of the population of the province, the increase was only 2 per cent.

Sickness and high mortality exhausted the savings of the people and diminished their wealth-producing powers, and much damage was done to cultivation by the earthquake of 1897. The shaking of the earth raised the beds of rivers and marshes, and 1897 and the following years were distinguished by abnormally heavy floods in Lower Assam. In Kamrup wide expanses of fertile rice fields were converted into swamps or covered with thick deposits of barren sand. The people clung to their fields with a pathetic obstinacy, but at last they realised that they were paying revenue and getting nothing in return and fairly faced the fact that it was useless to retain the right of cultivating an unculturable marsh. Much new land still awaited settlement, but reclamation takes both time and money and there was a positive decrease in the area settled at full rates per hundred of the population.

But the natural resources of the country are too great for such a period of depression to endure for long. *Kala-azar* slowly burnt itself out, public health improved, and the census of 1911 showed substantial growth. The population of the province as a whole increased by 15 per cent., the increase being particularly pronounced in the Brahmaputra Valley, which had suffered so severely in the preceding decade. In Goalpara, which was reinforced by immigrants from the densely peopled districts of Bengal, the growth of population was no less than 30 per cent. In Nowgong the decrease of 25 per cent. in 1901 was converted into an increase of 16 per cent. in 1911, and Kamrup, which had lost heavily in 1901, showed an increase of 13 per cent. in 1911. The Assamese themselves, who between 1891 and 1901 lost 6 per cent. of their numbers, had grown by 11 per cent. in the next decade. There was only one small subdivision in the province which did not share in the general development, and a period of stationary or dwindling population was converted into one of rapid growth. It would be difficult to over-estimate the effect of this change upon a country that for generations has been crying out for men to develope its great natural resources.

The province contains no large towns, and apart from tea possesses few industries of importance. Agriculture is the prevailing occupation of the people, and in 1911 ordinary cultivation as distinguished from the cultivation of the tea plant was the means of support of 72 per cent. of the population. Assam is a country of peasant proprietors, for there are still large areas awaiting settlement, and the able-bodied man who can obtain a plot of fertile ground for the asking will not expend his energies in tilling the fields of others. Amongst the Assamese there is the strongest prejudice against engaging in paid manual labour on roads or other public works, and only members of the aboriginal Bodo tribes will serve on tea gardens. Labourers of all classes form 12 per cent. of the population, but nearly 80 per cent. of these people are garden coolies, and it is not incorrect to say that for its labouring class the province is almost entirely dependent on other parts of India. So great in fact is the demand that some employers have gone even further afield and coolies for the Makum coal-mines have been brought from China. It is this dearth of hired labour which checks the extension of every form of cultivation; for a prosperous peasant is not disposed to

* Indigenous or district-born population is quoted, as in some districts immigration completely obscures the natural growth or decrease of population.

increase the area under crop if each additional field is so much more for him himself to plough.

The indigenous industries are of small importance. In Assam and amongst some of the hill tribes weaving is extensively practised as a home industry, but mill-made cloths are gradually displacing the products of the village loom. There are a certain number of makers of earthen and metal vessels and a certain number of blacksmiths, but the needs of the rural population are few and simple and the demand for manufactured goods is limited. Skilled workmen are employed in the tea factories, the Makum coal-mines, the oil refinery at Digboi, the railway workshops and the saw-mills, but nearly all of them are foreigners, and the artisan class continues, and is likely to continue, small and unimportant. In the Surma Valley the *swadeshi* movement stimulated for a time the demand for Bombay cloth and *Kurkach* salt, but did not lead to any development in the industries of the province.

Agriculture is one of the most conservative of industries, and there were no great changes during the period under consideration. The area under jute increased in Sylhet and Lower Assam, where the crop is now worth between £200,000 and £270,000, and in Kamrup the outturn of rice and mustard rose with the gradual reclamation of the land damaged by the earthquake of 1897. In 1906 an experimental farm was opened at Jorhat, but the researches and investigations of the Agricultural Department have not yet had time to make their way amongst the mass of the people.

As is only natural in so purely agricultural a country, the supply of food is ample for the inhabitants, and though a considerable quantity of husked rice is imported into the Assam Valley, it is only about one-third of the rice exported from the province in the form of paddy (unhusked rice).

Prices and Wages.—In the middle of the decade there was a marked rise in the price of rice, but this rise in prices benefited the people as a whole, as the majority were sellers and not purchasers. The wages of wage-earners responded to the variations of the grain market, but the really important section of the labouring population are the garden coolies, and they benefited from other causes. The price of tea rose, the profits of the industry were large, and employers found themselves in a position in which they could deal liberally with their labour force. They had every motive for doing so, as scarcity of labour was the one obstacle with which the industry was confronted. As a result managers spared no pains to retain their labourers and keep them prosperous and contented. Wages rose, and gardens took up rice land for the express purpose of settling their coolies on it. The prosperity of the coolie reacted on the ordinary villager. Always a good customer and ready to pay high prices, a large proportion of the enormous sums he received in wages passed into the pockets of the villagers who supplied his wants. It would, in fact, be difficult to over-rate the importance of the tea industry to Assam. Its annual wage bill is between £1,700,000 and £2,000,000, and practically the whole of this huge sum is spent within the province.

The Condition of the People.—Throughout the province the condition of the lower orders has improved. Cultivators have profited by the high prices ruling for all kinds of produce, for the harvests in Assam were for the most part good, and from the large sums of money set in circulation by the tea industry. The standard of living has risen and is rising, more is spent on luxuries, social ceremonies and jewellery, and indebtedness is said to be diminishing. This is partly due to the distribution of agricultural loans, partly to the institution of co-operative credit societies which afford facilities for borrowing on reasonable terms and are gradually reducing the rates of interest charged by professional money-lenders. The humbler Hindu castes and the lower orders of Muhammadans have risen in the social scale, and in Sylhet have become more independent, less ready to defer to those of higher social status. This independence of attitude is attributed partly to the spread of education, partly to their increased prosperity, of which the purchase of manufactured articles, such as umbrellas, coats and shoes, is evidence. In the Assam Valley, if the cultivating classes were not prosperous, they would have only themselves to blame. There is no dearth of good land, communications as a whole are fair, and the tea gardens afford them an excellent market for their produce, or, do they desire it, for their labour, in close proximity to their homes. Similar conditions prevail in Cachar, and though there is less culturable land still awaiting settlement in this district, this drawback is more than counter-balanced by great activity of trade. The imports of kerosene oil and salt show that more money was in circulation. Further evidence of prosperity is to be found in a

great growth of the excise revenue, in spite of a large reduction in the number of licensed shops and other restrictions imposed upon consumption. The revenue from opium and ganja increased by 46 per cent., though the quantity of these drugs consumed was only 25 per cent. more than in 1902–03.

The Middle Classes.—More than half the middle-class families of the province are resident in Sylhet, and their condition there is said to be deteriorating. The cost of living has increased out of all proportion to the increase in their rents and they suffer proportionately. A knowledge of reading and writing is no longer the monopoly of the few, and the amount that can be earned by writing petitions and deeds is steadily diminishing. The relations between the lower and middle classes are changing. The cultivators no longer show to the poor gentry the deference to which the previous generation was accustomed, they are less ready to serve them for small wages or to render them the old customary benevolences. In the towns there has been a rise in the standard of comfort, and a corresponding increase in expenditure. In the villages the poor gentleman merely sees his resources dwindling and has no opportunity of spending more. In Cachar and Assam there are fewer members of this class and their position is less unsatisfactory. In Cachar they have shared in the general development of the districts, whilst qualified Assamese have no difficulty in obtaining employment under Government, and the resolution of tahsils into their constituent mauzas has afforded them congenial employment. Till recently, the middle classes in this part of India have taken little interest in trade or commerce. They are now, however, turning their attention to this source of livelihood and the decade witnessed a satisfactory growth in the number of commercial enterprises successfully managed by higher-caste Hindus.

The Assam Range.—The tribes inhabiting the hills differ so entirely from the people of the plains, and from one another, that separate reference must be made to each of them. The Garos were much disturbed during the decade by the machinations of an agitator who laid claim to a considerable portion of the permanently-settled district of Goalpara, and subscribed large sums to support him in his projects. Apart from this there was little change in their economic condition, though education made some progress and there were in 1911 twelve persons in every thousand who could read and write.

Amongst the Khasis the decade was one of marked progress, both in population and material prosperity. There was a great expansion of potato and orange cultivation, and the trade in lime was brisk. The formation of the province of Eastern Bengal and Assam increased the population of Shillong and the amount of money in circulation amongst the people. The wages of labourers, servants, and artisans near the centres of population and trade were phenomenally high, and as the price of rice in this district did not rise during the decade, this rise in wages was pure gain. One of the most important factors in the development of the people is the spread of Christianity; Christians increased by 80 per cent. in the last intercensal period and now number nearly one-seventh of the total population.

Amongst the Nagas, on the other hand, there was very little change. They are healthy, happy savages who cling fondly to their own customs and decline to adopt new fashions until their utility has been demonstrated beyond any possibility of doubt. They enjoy their life as it is and have no wish to change it.

The Lushais only came under the administration of the Crown some 20 years ago, but during that period Government has spared neither money nor pains in endeavouring to improve their condition. The villagers are urged to substitute wet rice for the wasteful *jhum** system of cultivation, and advances are given for the purchase of ploughs and cattle. Potatoes, wheat, rubber, oranges, and lac have been introduced, and poultry breeding has been undertaken on an extensive scale. A large number of dispensaries have been opened and itinerating doctors have been appointed to tour through the district. Nearly every village has its sweeper and steps have been taken to protect the village water supply. Both literary and technical education have been pushed on, and the Lushais are now filling many subordinate posts under Government. There are, however, grounds for fearing whether progress may not possibly have been too rapid, for the Superintendent of the Hills gives the following rather gloomy account of the people:—

* *Jhuming* consists of felling and burning the jungle and sowing crops amongst the ashes. A *jhum* cannot be cropped for more than three years in succession, so much land is required.

The effect of these measures is to bring about a gradual change in the habits of the people. They are becoming less nomadic and are showing a strong tendency to desert agriculture, their hereditary occupation, and live by their wits. They have, undoubtedly, more money to spend or waste. This is evidenced by the change which is taking place in their dress. Stout homespun cloths are being discarded for foreign apparel, such as shirts, trousers or "shorts," coats, caps, &c. Imported yarn is displacing the indigenous article in the manufacture of cloths, and cheap and tawdry articles of personal adornment are becoming more common. Though he may have more money to spend, it is impossible to say that the Lushai is now better off than he used to be. In his village he had all he wanted, and lived a simple and happy life. He has more money now, but the possession of money has created more wants, and the simple happiness of rural life is giving place to more complex conditions of existence. The effect on his moral character has, also, been far from satisfactory. The Lushai is a "dour" man and has not the simple open character of the Naga. He is by nature litigious and given to "evil speaking, lying, and slandering."

Aboriginal village life does not provide so congenial a soil for the propagation of these noxious growths as imported civilisation, which seems to have the unfortunate effect of accentuating the worst traits of the people. It is true that a certain number of the Lushais have taken advantage of the openings for improvement so freely provided by Government and have profited by them, but, on the whole, the results are depressing, and are such as to give grounds for anxiety for the future welfare of the race.

Improvements effected through the direct Agency of Government.—There are four special fields of activity where Government in an agricultural and somewhat backward province can be of material assistance to the people. These are communications, the land revenue administration, a matter of great importance in a ryotwari area, medical and sanitation, and education.

The decade witnessed the most notable improvement in the communications of Assam that has occurred since the time when steamers begin to ply regularly on the great rivers. The completion of the Assam-Bengal Railway linked up Dibrugarh and the districts on the south bank of the Brahmaputra with the Surma Valley and the sea at Chittagong. The extension of the Eastern Bengal State Railway to Gauhati gave the Assam Valley direct railway communication with Calcutta. Communication with the outer world was thus greatly accelerated, and planters were enabled to send their tea direct to a seaport without the cost or risk of handling.

Many improvements were introduced in the administration of the land revenue system, all of which were in favour of the ryot. The gross amount of revenue imposed at the settlement of 1893–94 was probably not excessive, but its incidence was admittedly uneven, and these inequalities were aggravated by the changes in level caused by the earthquake of 1897 and by the impoverishment produced by *kala-azar*. In 1902 the Government of India directed that the land revenue demand should be reduced by £12,000 in the most seriously affected tracts—Kamrup, Nowgong, and Mangaldai. This measure put fresh heart into the people, and it was followed by the re-assessment of the Assam Valley on scientific principles. It was not found necessary to reduce the total demand, but it was distributed in closer accord with the capacity of the land to bear it. The dates for the payment of revenue were altered to suit the convenience of the ryot; district officers were given general power to exclude from assessment those who were genuinely poor, and the old system of collection through mauzadars was reintroduced. This system is more elastic than the system of collection through salaried tahsildars which it replaced. The mauzadar is almost invariably a native of the mauza in his charge. He knows the ryots, whom he can trust to pay and whom he must proceed against by law, and he is able to import human relations even into the dreary business of tax-gathering. Incidentally the re-creation of the caste of mauzadars afforded employment to middle-class Assamese families which were in a somewhat languishing condition. The status and the position of village headmen was also raised by giving each of them a small grant of land free of revenue. Measures such as these could not fail to improve materially the condition of the rural population.

There is probably no department of life in which India lags so far behind the standards of the west as in its provision for the treatment of the sick. But here, too, there was much advance. The number of hospitals and dispensaries increased by 13 per cent. and of patients by 72 per cent. Strenuous efforts were made to popularise the sale of quinine. Pice packets had been condemned by the medical faculty as unsuitable, as a single dose is of little or no assistance in combating malaria. Quinine was accordingly issued for sale below cost price, in treatments of 24-grain pills neatly packed in a glass bottle. These treatments are sold at 3 annas each and are much appreciated by the people.

The province reaped to the full the benefits of the educational reforms initiated by the Government of Lord Curzon, for effect was given to them by Sir Bampfylde Fuller, who was himself an ardent educationist. Primary schools were placed directly

(Assam.)

under the local boards, the salaries of the masters were increased and good work encouraged by a system of capitation grants for each pupil found fit for admission into the two upper classes of the school.

A large number of excellent village school houses were built, better equipment was provided, and fees in primary schools were abolished. The expenditure on primary education increased during the decade by 80 per cent. The results of this policy are to be seen in the census returns, which showed an increase of 28 per cent. in literacy amongst males, though the definition of what constituted literacy was stricter than at any previous enumeration. The increase was particularly pronounced in the Assam Valley, and in one district, Nowgong, amounted to no less than 76 per cent. Secondary education also advanced, the number of pupils increased by nearly 50 per cent. and the number of boys matriculating in 1911 was nearly double the number in 1901. In Bengal the *literati* have great difficulty in obtaining suitable and congenial employment, but the natives of Assam have not yet succeeded in filling all public appointments in their province, and capable young men have thus no difficulty in obtaining service under Government.

It is thus permissible to look back upon the last decade in Assam with feelings of considerable satisfaction. The political agitation that distracted the neighbouring province of Bengal was hardly felt beyond the borders of the district of Sylhet; Government was able to pursue a vigorous and enlightened policy in those departments which most closely affect the moral and material welfare of the people, public health was good, trade and agriculture flourished, and a distinct advance was made along the path of civilisation.

United Provinces.

Census Figures.—The population of this province at the census in 1911 was found to be 48,014,080, inclusive of the populations of the three states of Rampur, Tehri-Garhwal, and Benares, as against 48,494,374 in 1901. The loss amounts to 1 per cent. The causes of this loss are abundantly proved to be the epidemics of plague from which the province has suffered all through the decade 1901–11 and the epidemic of malaria which followed the famine of 1907–08. The latter calamity especially did enormous damage. The deaths from fever, inclusive of malaria, during the four months September to December 1908 were only some 200,000 less than the total deaths from plague in the 10 years. The most disquieting factor in these circumstances is that the whole loss and more fell on the female sex, which lost something under 2·3 per cent., whilst the male sex gained between ·1 and ·2 per cent. In a province where males are always in excess this is a serious matter. There are now only 915 women to 1,000 men as against 937 in 1901. The cause is undoubtedly that plague and malaria are both house diseases; the rat-flea and the malarial mosquito are both found indoors; and men, living out of doors far more than women, who are confined to their homes either by the *parda* system or by their household duties, have suffered far less than the other sex. Whilst the female birth-rate (41·1 per 1,000) has been, as usual, lower than the male birth-rate (41·7), the female death-rate (39·7) has been higher than the male death-rate (38·9). It may be pointed out also that plague affects life chiefly in the middle ages, and malaria all through life. The loss, therefore, has chiefly fallen on the middle ages, when the population is reproductive. Despite this fact, however, the large bulk of the population, some 4,000 out of 10,000 in the case of each sex, is aged between 15 and 40, the reproductive age, so that recuperation during the next decade should be rapid, provided that circumstances are favourable. The most important of the favourable circumstances required is an abatement of plague.

The province loses greatly by emigration, which is chiefly to Bengal, Bihar and Orissa, Assam, the states of Central India and Bombay; a small number go abroad, chiefly to those British colonies where indentured labour is in demand. Owing to the absence of statistics, it is impossible to give any accurate figures, but it is certain that the volume of migration, though possibly actually less, is certainly proportionately greater than 10 years ago. The decade's loss in emigrants may be put at from 1,300,000 to a million and a half.

Of the main religions, Hindus have decreased by 1·4, Muhammadans by 1·1 per cent. Christians and Aryas have increased by 73·7 and 100·9 per cent. respectively. These are the two chief proselytizing religions, and gain almost entirely by conversion and chiefly at the expense of Hinduism. Indian Christians have nearly doubled

since 1901 (the exact increase is 98·2 per cent.). Other religions together do not total 100,000 souls. In every 1,000 persons 850 are Hindus, 141 Muhammadans, 4 Christians, and 3 Aryas.

Of the questions of age, sex, and civil condition little need be said. The chief points are (1) that the bulk of the population lies between the ages of 15 and 40, which gives promise of a higher birth-rate in the future: the mean age of the living is some months greater than in 1901; (2) that there are now only 915 women per 1,000 men as against 937 in 1901; and that there is no reason to suppose that there is, as often asserted, any extensive concealment of women; and (3) that the population is as much married as it ever was. Amongst males only 449 and amongst females 305 per 1,000 are unmarried. There are indications in the tables that the age of marriage is higher than it used to be, but even yet, of 1,000 females aged 15 to 20, only 20 are unmarried.

Literacy has considerably increased. There are now 611 literate males and 49 literate females per 10,000 of each sex as against 578 and 24 in 1901.

Nothing need be said of the distribution of caste save to note the growing tendency of lower castes to affiliate themselves to higher castes by claiming descent from the old twice-born castes of the Hindu legends. The caste system is continually changing, and it is impossible to present in such a report as this any intelligible account of its kaleidoscopic variations. Besides the desire of low castes to better themselves (which is ultimately a matter of money and as such points to an increasing standard of comfort), the most striking point is the tendency for functional castes to break up into smaller castes because of differentiations in function.

As regards the occupations of the people, the most important point is the enormous proportion following agriculture as a primary source of income; as many as 71 per cent. of the total are supported by agriculture, 120 per 1,000 are engaged in various industries, of which industries connected with dress and the toilet (28) and textile industries (24) are the chief. Trade and commerce support 45 persons per 1,000, of whom 30 are connected with the trade in food-stuffs. The public services account for 13, the learned professions and arts for 11, domestic servants for 19, and beggars for 10 per 1,000. Jails and asylums account for the low figure of 5 per 10,000.

Agriculture shows a great increase and many industries a decrease. It must not be supposed, however, that industries are therefore on the down grade. The census figures show only the state of affairs existing on a particular day. At the time of census agriculture was very lucrative, as there had been a succession of fine crops. A large proportion of the population is "partially agriculturist," *i.e.*, follow agriculture in addition to other pursuits; and as the rule laid down that the principal occupation meant the most lucrative one, many persons who were, *e.g.*, partially artisans and partially agriculturists returned themselves as principally agriculturists and secondarily artisans, instead of *vice versâ*, as in other circumstances they would probably have done. The decade has been one of great industrial development. A new special return furnished by the managers of mills and factories shows that there are now 366 such concerns employing over 20 hands apiece, of which 176 use some sort of machine power. Of these, 26 are connected with the cotton industry, some branches of which, however, are seasonal and were not in full swing at the time of census; 37 are connected with the metal industry, 60 with glass and earthenware, 39 with the production of chemical products, 40 with food (chiefly grain and oil mills, &c.), 41 with the building industry, and 31 with industries classed under the head "luxury," which means, chiefly, printing presses. From such figures as are available it appears that 90 new ventures of this kind in the cotton industry alone have come into existence since 1901. It may be suggested that this affords another reason for the decrease shown by the figures in the artisan population, for the mills are ousting the former hand industries. These 366 factories give employment to 62,235 employés.

Of the owners of these concerns, 87 are companies whose directors are entirely European or Anglo-Indian, in 43 cases they are entirely Indian and in 71 partly European and partly Indian. Of the rest of the concerns, 52 are owned by Europeans and Anglo-Indians, 32 by Government or local public bodies, and the rest by Indians.

Changes in Production and Distribution.—A few words must be said regarding the character of the seasons, which is the most important element in determining production. The years from 1901 to 1904 were on the whole favourable and prices of food-grains were low. From 1905 to 1909 seasons were on the whole bad, being marred by an unprecedented frost, by two severe droughts, and by numerous minor

(United Provinces.)

calamities, and prices were maintained at a high level; while the last two years have seen a rapid increase in prosperity, unaccompanied, however, by such a fall in prices as might have been expected.

Mention must also be made again of the recurring epidemics of plague, which have prevailed with varying severity throughout the decade, and have not only diminished the productive power of the people but have given rise to a feeling of uncertainty that has discouraged enterprise.

Notwithstanding these drawbacks, the production of the provinces shows a distinct increase during the decade. The area under cultivation has expanded, and subject to the nature of particular seasons cotton, wheat, and oilseeds are produced in substantially larger quantities. On the other hand, the cultivation of indigo and poppy shows a marked fall, due in the former case to the competition of the synthetic product and in the latter to administrative action, which, however, has coincided with the natural effect of high prices of alternative crops. Owing to foreign competition, sugar-cane, the most valuable crop of all, has not progressed as it should, and has in fact declined in the tracts where it is used for the manufacture of sugar.

As regards the main factors of production, the water supply has been very largely increased, partly through the construction of new works by the State and partly by the construction of very large numbers of masonry wells and other works, carried out by the people under the stress of dry seasons, but to an unprecedented extent with the aid of capital provided by Government. The numbers of working-cattle have been reduced by drought and disease, and their price has risen greatly, owing partly to this cause and partly to the curtailment of grazing areas resulting from the extension of cultivation. It cannot, however, be said that tillage has suffered from want of power except in a few localities, and a most encouraging fact is the rapid growth in popularity of the practice of preventive inoculation against contagious disease, a practice which on its first introduction was viewed either with extreme suspicion or with active hostility.

No definite opinion can be advanced regarding the growth of the supply of agricultural capital actually in the hands of producers, but there has been a very great advance towards making capital available on more reasonable terms than are offered by the ordinary money-lender; on the one hand, the system of Government loans both for land improvement and for other agricultural purposes has been greatly simplified and popularised, and, on the other hand, the organisation of co-operative credit has made considerable progress, which, however, is only an earnest of the benefits to production now to be expected with some degree of confidence from the gradual development of agricultural co-operation.

Lastly, the decade, and especially its closing years, have seen the beginning of a most important change in the attitude of the people towards agriculture; the need for moving with the times is being gradually recognised, and there is increased readiness to consider suggested improvements.

In industries other than agriculture the province is still backward. The indigenous handicrafts have, as a rule, continued to decline, though in a few cases benefit has resulted from the institution of trade schools or from co-operation among producers, and the extension of organised industries, though substantial, has not been so rapid as might have been expected. In this case, too, there are signs of a gradual change in attitude, particularly during the last years of the decade; Indians have here and there brought together capital and established new ventures; the idea of a commercial or industrial career is gaining ground among the educated classes; and there is a growing, if still somewhat uninformed, interest in schemes of technical education and industrial training.

In the absence of any large development of industries, the main features of the trade of the province are still the export of agricultural produce and the import of necessaries and conveniences. Food-grains are exported on a large scale in all but famine years; the surplus available naturally varies greatly with the season, but its amount indicates that there are no grounds for anxiety regarding the sufficiency of the food-supply. Among imports the chief changes are the large increase of consumption of coal, kerosene oil, and salt. The use of coal has extended with the increase in factories and the development of the railway system, but it has not yet become popular as domestic fuel in the towns.

There has been a distinct upward movement in wages during the decade. It is particularly marked in the case of skilled labour, and also of domestic service; but unskilled labour in the towns has secured increased rates with in some cases a

substantial rise, and in the country the old customary rates are giving way village by village as the local labour supply becomes reduced in proportion to the demand through mortality, migration, or adoption of other means of subsistence. The mobility of labour is still very small when judged by western standards, but in more and more villages the possibilities of finding employment elsewhere are beginning to be realised, and the large recent increase in the amount distributed by money-orders indicates that most districts of the province are affected by this change.

Education and Literature.—In endeavouring to estimate the moral and material progress of the people from their educational and literary activities, one is met at the outset by a contrast between the genuine and widespread appreciation of the importance of education by certain classes and the disappointing quality of much of their literary output. The present state of indigenous literature is not really a symptom of social disease, but is partly the natural result of the first impact of western thought upon ancient habits and beliefs, accompanied by an imperfect assimilation of new ideas and a breaking away from long-established tradition, and is partly due to the popularity of foreign culture compared with that of the country. Already, however, yearly in slightly increasing numbers, works are appearing which display some reflection and ability to discriminate in the application of modern ideas. But time is not likely to restore to its former place the old learning. The band of those devoted to classical scholarship is dwindling rapidly; as noted scholars fall away, they are not replaced by others capable of filling the gap. While the growth in higher branches of education has been generally satisfactory, especially in collegiate stages, progress in elementary education has been comparatively slow. This is largely due to the fact that education is still welcomed only by the higher classes in the social system. Government on its own initiative has been steadily supplying technical and industrial education with a view to reviving decaying arts and industries and improving workmanship and mechanical skill. The response to its efforts was not at first encouraging, but lately scholars have been pouring into the schools, and the outlook now seems full of hope.

Politics.—The provinces did not altogether escape from the wave of unrest which prevailed from 1907, but its results were less manifest here than in other parts of India. Political activity was greatly stimulated, especially among Muhammadans, by the enlargement of the legislative council in 1909.

Moral Standard of the People.—Little can be said with profit regarding changes in the moral standard of the people, but stress must be laid on the great advance in rectitude which has been secured among almost all classes of subordinate officials, and among none more than the police. While improved administration has necessarily counted for much in securing better conduct, there can be no doubt of a gradual change in the attitude towards corruption of the classes from whom officials are largely drawn, and this change must react on the attitude of the whole population. The influence of the co-operative movement must also be noticed; already there are distinct signs among the societies of a higher standard of conduct and of increased independence and self-reliance.

In the region of religion there have been distinct changes. While the number of Christians has, as shown above, increased largely and the Arya Samaj has widely extended its influence, there has been a tendency to insist more closely on Hindu orthodoxy, not to be defined easily in words, but to be perceived clearly in the atmosphere of the province; its most definite manifestation is the demand for religious teaching in schools and for universities established on clear religious lines. Among the Mussulmans there has been an intensified manifestation of the missionary spirit and a development of the sense of corporate union with fellow-religionists elsewhere.

Changes in the Revenue System and Tenancy Law.—Classified figures of tenants' holdings show that the Agra Tenancy Act of 1901 has had a slow but perceptible effect in promoting fixity of tenure. Ejectment suits have, however, been a great burden on the courts, and in other respects the need of a revision of tenant law for both Agra and Oudh is recognised by the appointment of a committee now sitting.

There has been no change of policy or methods in settlements. Efforts to obtain automatic elasticity of revenue collections in time of seasonal calamity have been continued. The result of careful consideration has been a revision in 1907 of the circular dealing with procedure for remissions and suspensions. The present rules

ensure that the agriculture of the provinces is preserved from demoralisation at times of crisis.

General Remarks.—A very marked change is in progress in the standard of life of the upper and middle classes, which may be summarised as a gradual approximation to European standards adapted to local conditions. This change is seen only to a slight extent in food, but more particularly in the method of serving food; it is very obvious in clothes, both in style and in materials; in a greatly extended use of furniture; in a demand for better house accommodation, with gardens and other amenities; in recreation and especially in organised games for the younger men; in the wider use of articles such as bicycles, typewriters, fountain pens, and European stationery; and in larger expenditure on books and periodicals, and in subscriptions to clubs and societies.

Among the lower classes of the urban population changes are naturally less marked, but the tendency is on the whole in the same direction, as is evidenced by the growing use of articles such as shoes of European patterns, hand-lanterns, and (among Muhammadans) enamelled iron vessels for domestic use. These classes are now better fed, as a larger proportion of them are able to afford wheat-flour, and they are on the whole better clothed, especially in winter, when woollen jerseys and caps, as well as putties, are now commonly seen.

The life of the country is substantially unchanged as regards food, clothing, and house accommodation. A larger proportion of the cultivators are probably now in a position to eat wheat; salt is cheaper since the successive reductions in the duty and is consumed on a larger scale; kerosene oil continues to increase in popularity, and there are signs of a very gradual change in minor articles of dress.

For the lower classes as a whole the consumption of alcohol and drugs is probably the best test of rising prosperity, but the test cannot be applied over the past decade, which has been marked by a steady pursuit of the policy of checking increased consumption by restrictive measures. The result has been that the consumption of spirits and opium has been stationary, while that of hemp-drugs has decreased substantially. The fact that the less harmful intoxicants have paid a greatly increased duty indicates increased prosperity on the part of the consumers. Reference must, however, be made to the deplorable spread of the cocaine habit which has occurred in recent years.

Probably on the whole there has not been much change in the scale of expenditure on social ceremonies. Societies exist with the object of limiting such expenditure, but, as with the few temperance societies, their effects are at most local, and on the other hand the tendency of some lower castes to claim a higher social and religious status may involve the adoption of an increased scale. Nor can any definite conclusions be stated as to the growth or decline of indebtedness among the people, but there can be no doubt that, as the co-operative movement spreads, the burthen of unproductive debt and social expenditure will decline while the productive employment of capital increases.

Punjab.

Since the constitution of the North-West Frontier Province, in 1901, the Government of the Punjab, shorn no doubt of some of its former prestige and of many of the characteristics which singled out the Punjab among the provinces of the Empire, has been freed from the engrossing and often embarrassing problems of frontier administration, and has had leisure to devote that attention to the complexities of domestic policy which the rapid development and increasing wealth of the province imperatively demand.

Among the various activities of the period, and indeed affecting all, either directly or indirectly in more or less important degree, the outstanding features of the decade are undoubtedly plague and colonisation. The more obvious results of these causes are graphically apparent in the facts that on the one hand between the census of 1901 and that of 1911 the population of the British districts has fallen by 1·7 per cent. from 20,330,337 to 19,974,956, while, on the other, the cultivated area has in the same period risen by 8·4 per cent. from 26,279,021 acres* to 28,483,489 acres, and the more lucrative irrigated area by as much as 14 per cent. Taken together, these

* These figures are obtained by deducting from the returns for 1900–01 the totals for Hazara, Peshawar and Kohat districts and half those for Bannu and Dera Ismail Khan.

figures indicate, even apart from the general rise of prices and other considerations, an extraordinary increase in the individual wealth of the agricultural community, upon the prosperity of which the fortunes of the province depend.

Plague.—The visitation of plague still continues. The Punjab has been by far the greatest sufferer from the epidemic, and that too in spite of the fact that the northern and western districts have been to a large extent immune from its ravages. In the decade the recorded deaths from plague have exceeded two millions, out of a total for the whole of British India of 5½ millions, the culminating point being the year 1907, in which the number of deaths reached the appalling figure of 608,685. The significance of these figures may be judged from the fact that the population of the Punjab is no more than one-thirteenth of that of the whole of British India. Not the least distressing feature is the heavy mortality among women of child-bearing age, the effects of which are increasingly apparent in the returns of crime and of civil litigation. The people, however, have at last realised that safety lies in evacuation of infected areas, and also to some extent that inoculation is a real protection for those who must be in contact with infection. Possibly owing to these causes, the deaths have fallen considerably during the past four years.

Occupations.—The population of the province is preponderatingly rural. Out of the total of 24,187,750, 2,567,282 persons, little more than 10 per cent., are returned as living in the census "towns." There is little movement to the towns, for, making allowances for changes in classification, the total urban population is very little greater than it was ten years ago. It is the smaller towns, however, that show any decline; the cities with less markedly rural characteristics have in the main increased. The prosperity of the smaller towns is greatly influenced by the opening of new lines of railway, but for the rest their conditions are largely rural and are affected by the same causes as operate in the surrounding villages.

Over five million persons are engaged in the actual cultivation of the soil, and, including their dependants, 14 million persons, or 58 per cent. of the whole population, depend on cultivation as their principal source of livelihood.

Approximately five millions, or 21 per cent. of the total population, are dependent upon industries as a source of livelihood, but these figures include the very numerous class which is engaged in the village industries subsidiary to agriculture, such as potters, carpenters, and blacksmiths, as well as in the cottage industries of the country. The total number of persons employed in "factories," 443 in number, amounts to no more than 49,324, and with their dependants may total 120,000, or less than ½ per cent. of the whole. 22,188 skilled workmen and 24,052 unskilled labourers are employed in factories.

The agricultural class is predominantly one of peasant proprietors. The census returns show an additional quarter of a million persons as partially agriculturist, so that over 5¼ millions are more or less wholly engaged in agriculture. Of these, half a million are farm servants and field labourers, and 4¾ millions are either owners or tenants of land. Between these classes the census returns make no distinction, and in the system of small holdings that prevails a cultivator is frequently owner of part and tenant of part of the land he cultivates. The revenue returns, however, give 3½ millions as the total number of owners in the province, so that the total number of tenants owning no land would be 1¼ millions. These figures must, however, be accepted with considerable reserve and are probably only fair approximations. From the statistics mathematical averages show that these 3½ million owners own 11 acres apiece, exclusive of land owned in common, of which 7 acres are cultivated and assessed to Rs. 8 land revenue. Four-fifths of the owners are members of agricultural tribes, and it is significant that the average holdings of such owners are appreciably larger than those of non-agriculturists.

Of the five million persons actually engaged in agriculture, half a million are, as we have seen, farm labourers, and a further quarter of a million are rent-receiving landlords. Thus 4¼ millions are owners and tenants actually cultivating the soil. From this it appears that the average self-cultivating owner or tenant cultivates 6½ acres and pays Rs. 7 per annum as land revenue. These figures are in accordance with pre-conceived ideas.

Agriculture.—Wheat has rapidly gained in popularity during the last ten years, and increasing attention is being paid to barley, though the grain is not generally up to the standard of English brewers. Toria, a variety of rape, is largely grown in the

early winter on the canals of the Central and West Punjab, and is a very remunerative crop. The attention of export houses is also being turned to gram. The autumn crops have all lost ground in the general increase in cultivation. Sugar-cane is at a standstill, and cotton is looked at askance with its variable market and liability to disease. The millets suffer from the slackening demand due to the gradual substitution of wheat for the coarser grains in the general dietary.

The organisation of the Department of Agriculture has not as yet resulted in much that is tangible in the practice of agriculture, though the introduction of agricultural machinery, necessitated by the dearth of labour, is a sign of a break away from conservative ideas. On the other hand, the development of the Civil Veterinary Department has proceeded rapidly, and the efforts made to prevent and cure diseases of live stock have met with a ready welcome.

Limitations on Alienation of Land.—The Land Alienation Act has now been in operation for 12 years and has amply fulfilled the objects of its originators. Capital, no longer obsessed with the idea that agricultural land is the only form of investment, is free to develope the still latent industrial resources of the country, while the land has ceased to pass out of the hands of those by hereditary training qualified to employ it to the advantage of the country. All impartial persons admit that no fair bargain is possible between the capitalist, backed by all the resources of the administration, and the uneducated *zamindar*, from whom the consequences of his action are veiled in secrecy; and that the State is justified in attempting to prevent the agriculturist from selling his birthright for a mess of pottage. At the same time the possession of land by capitalists able and willing to devote their brains and means to the development of their property has been productive in the past of progress in agricultural science and practice, and this has been recognised by the State in the distribution of its undeveloped land on the various irrigation canals.

Value of Agricultural Land.—The fears at one time entertained of the destruction of agricultural credit by the limitation of alienation have proved unfounded. The price of land which fell slightly after the passing of the Act has since risen by leaps and bounds, and from an average of Rs. 78 per acre for the five years ending in 1901 has in the last five years averaged Rs. 114, the figure for the last year being as high as Rs. 129. The intervening years have been for the most part years of plenty, but the two causes which have chiefly contributed to this rise have been the extraordinary increase in the price of agricultural produce and the progressive leniency of our assessments. The incidence of the assessment ten years ago was Rs. 1.1.3 per acre; it is now no more than Rs. 1.2.5 per acre, with the result that land now sells at 123 times the land revenue, which indicates that the purchaser, expecting no more than a 5 per cent. return on his purchase money, estimates the rent received from the tenant to be seven times the land revenue instead of being equal to it as theory still demands.

Irrigation and Canal Colonies.—The completion of the Lower Chenab and Lower Jhelum Canal projects and subsequent development of the agricultural resources of the irrigated areas in the Lyallpur, Gujranwala, Jhang, and Shahpur districts are dealt with in the annual irrigation and colonisation reports and dominate many of the others. The population of the Chenab Colony is well over 1,100,000 and of the Jhelum Colony some 200,000, the immigrants being numbered at the last census at 608,847 and 141,073 respectively. Colonisation does not, however, involve a special increase in the population of the province, as the colonists are not immigrants from without, except that the creation of a new food supply stimulates the birth-rate and minimises the retarding effects of scarcity. The relief given to the congested districts of the province by the transference of these enormous numbers to areas of previously uninhabited desert is immense; and that the wealth earned in the colonies is very largely distributed over the whole province is shown by the large amounts of money annually despatched by money-order from the colonised areas. The protective character of these western canals is further exemplified by the train loads of *bhusa* which the concession rates admit of being despatched in every direction to districts suffering from scarcity of fodder. It is unlikely that famine relief will ever be required in the future, at any rate on anything like the scale of the past, for on the appearance of distress in the least secure tracts like Hissar, the population readily migrates to the colonies, where labour is always welcomed, returning again with money in pocket on the return of favourable seasons.

(Punjab.)

As one of the main factors in the development of the colonies, the extent to which the grantees form a picked body of the more progressive elements in the population must not be lost sight of. To this no less than to their distance from the colonised areas may be attributed the circumstance that the Delhi districts have scarcely contributed at all to the colony population. In the early days of colonisation on the Rakh branch of the Lower Chenab Canal the difficulties and dangers of the first colonists certainly eliminated all but the stoutest, and even such among them as did not leave home entirely voluntarily had achieved distinction, though their activities lay in directions which compelled attention from the police. Later on all of the many reward grants, whether to civilians or soldiers, were of necessity granted to such as had distinguished themselves in their various walks of life, and the competition for peasant grants rose to such a pitch that a selection of the best was possible and in general was made; such considerations do not apply to the enormous body of non-grantees, who have swarmed to the colonies as labourers and traders, or in professional and business capacities; but even among them the sacrifice and risks involved in cutting adrift from old associations and ties have ensured that the general body of emigrants of these classes too come from the more progressive of the peoples of the province.

As a set-off against the enormous benefits which have been conferred on the province by canal irrigation, certain drawbacks have to be remembered. The attractiveness of the easy and lucrative cultivation in canal-irrigated areas has drawn from other tracts, and in particular from those where the more costly and strenuous well irrigation is practised, a large body of tenants, whose desertion has compelled the emigration of a large number of owners also. In such cases the fall in the value of land and the loss of agricultural capital, though local, is considerable, and is only partially recompensed by the reduction of the Government demand and offer of colony grants. But the most important and urgent problem connected with canal irrigation is concerned with the question of water-logging. Every year spring level steadily rises and chronic water-logging has already declared itself in specially situated localities in Gujranwala and other districts. This spectre of water-logging is a nightmare to thoughtful canal engineers. It is certain that to reduce seepage expensive lining operations will have to be resorted to and scientific drainage will also become increasingly necessary. The effect of extensions of canal irrigation, and in particular of subsequent water-logging on the virility and physique of the people has perhaps hardly yet had time to develope, but it is not open to question that an appreciable effect is being caused by the substitution, for previous conditions of hardship and poverty, of ease, comfort and comparative wealth. The spreading of the huge volume of canal water over the face of the country and the immense evaporation that takes place are having their effect on the climate, in the lessening of the frequency and intensity of duststorms, the reduction of the general average of heat, and possibly, in the west, an increase in the rainfall. The Punjab hot weather in fact is no doubt becoming less unbearable. Such tendencies can be vaguely asserted, but ten years is too short a time in which to derive definite conclusions based on scientific data of the effect of canal irrigation on the climate of the Punjab and the meteorology of India generally.

Industries.—A survey of existing industrial conditions in the province is afforded by Mr. Latifi's "Industrial Punjab," published in 1911, in which the scarcity of labour, of capital, and of facilities for distribution of commodities are clearly shown. The scarcity of labour is at present insurmountable and is accentuated by the growth of the canal colonies and the demand for field labour at remunerative wages. The ravages of plague and of malaria, it may be hoped, in their extreme form, are things of the past, but it must be years before a free flow of labour is available for industrial enterprise. Meanwhile, only the most profitable industries or those requiring little labour have any chance of success. Cotton ginning and spinning factories and flour mills have sprung up in all directions, and, in fact, the ginning factories have outstripped the average supply of the raw material. In these circumstances the chief cottage industries show considerable vitality. The great body of weavers, in particular, with improved methods, still maintain a precarious existence, though before them the chief danger lies in the growth of the demand for a better article than the product of their looms.

Wages.—The natural development of society from status to contract which is manifest no less in the agricultural than in the industrial life of the country, is nowhere

more apparent than in the phenomenal rise of wages that the past decade has witnessed. It is the fact that cash wages are steadily displacing old customary wages in kind, the process being in many parts already complete. At the same time wages of unskilled labourers and of skilled artisans have doubled in the past twenty years, the greater portion of the advance having taken place in the last ten years, and in particular since 1905. This increase represents an increase in real wages, though not of the same extent as in the rupee equivalent, and marks the operation of the law of supply and demand emancipated from the dead hand of custom. The immediate causes are not far to seek—the general rise in prices, mortality from plague among the labouring classes, and the enormously increased demand for labour.

Communications.—The last ten years have witnessed great activity in railway construction, over a thousand miles out of the four thousand odd miles of line now operated in the Punjab having been constructed in this period. The new lines have been mainly in the west of the province, and have been necessitated by the great expansion during the decade in the area of cultivation on the perennial canals. The prosperity of the Punjab depends to an unusual extent on the speedy and economical disposal of its food products, and the lines recently constructed contribute not a little to that result. Hitherto private enterprise has had little encouragement in this direction, and the construction of feeder lines by that agency has been effectually prevented by the great capital outlay necessitated by the high specifications insisted upon by Government.

Credit.—The increase in the number of joint-stock companies is at first sight a subject for congratulation, but the character of many of the enterprises is such as to give rise to misgivings. Thirty-three banking and loan companies, including the two European banks, have an average paid-up capital of less than £15,000 apiece, while the 43 insurance companies only boast a total paid-up capital of some £23,000. In the doubtful nature of many of these concerns lies the possibility of a considerable set-back in the development of a credit system, a danger to some extent averted by recent legislation. The credit system of the province indeed is still undeveloped, though a start has undoubtedly been made. There is no cheque system, and advances are taken from the banks in cash and not in the form of credits to be operated on by cheques. Banking business is mainly on remittance, though, of course, cash advances on security are made. Banking as now practised differs from money-lending in the fact that clients deposit their savings with the banker for him to utilise, and in the yearly increasing amount of these deposits with bankers lies the germ of progress. Commercial confidence, however, has at present a precarious existence, and its growth will depend entirely on the honesty and capacity of the captains of industry.

The joint-stock company system, indeed, requires a greater capacity to combine for a common object than is as yet found among members of Indian society not otherwise inter-connected, and its chief success is obtained where the company is grafted on the caste organisation. To this source may be traced the success of the co-operative principle in the province, which now possesses 1,743 co-operative societies with a capital of £383,000. These societies, limited as they are to single villages, or, in the case of urban societies, to separate castes of artisans, include on their rolls only members connected by blood relationship or by home ties, and in their identity of general interest lies the strength of their position. Much of the credit of their success is due to the registrars, who have preferred to hasten slowly rather than to pile up statistical results. In any case the Punjab has shown that there is a place for the co-operative principle in the rural economy, and the growth of the societies is one of the most remarkable features of the decade.

Trade.—Nowhere, however, is the progress made in the last ten years more graphically apparent than in the figures for internal trade. Ten years ago the value of imports which had been for some years consistently near the figure of £8,300,000 rose to £10,300,000 in 1901–02, and export to the same value in that year was a great advance on previous figures. To-day exports and imports have in most years risen to a total value of £17,000,000, and in 1911–12 the figures were £20,000,000 and £18,300,000 respectively. The statistics show that, inclusive of treasure, the figures for which are separate, the imports in the last decade have exceeded the exports by some £28,000,000—chiefly in the item of treasure—indicating presumably that capital has been flowing into the province at the rate of over £2½ millions sterling a year.

Absorption of Gold.—The closing years of the decade have witnessed a phenomenal leap into popularity of the sovereign. The statistics of the Finance Department show that the absorption of coined metal by the Punjab has been fairly uniform throughout the decade at about £1½ millions sterling per annum, but whereas £5 millions were taken in rupees in the first five years, less than £1 million of silver was absorbed in the last five of the decade, gold receipts leaping up from nearly £1½ millions to £6½ millions in the same periods. The effect of the drought in Northern India and general depression of trade in 1907–08 caused a fall in the exchange value of the rupee, with the result that, in the Punjab as elsewhere, the Government stock of gold was all drawn out and silver poured into the treasuries; the figures for 1908–09 showing that over £1½ millions sterling in silver were returned from circulation in that year, an amount which would no doubt have been exceeded had there been more gold available than the £665,000 actually absorbed. With the return of confidence in the stability of the rupee, and resumption of normal trade conditions, £2½ millions of silver were taken in 1909–10, but the lesson has not been lost, and over £2 millions sterling have been absorbed in gold in each of the succeeding years, a total of £1 million in silver having been returned in the same period. Opinion is unanimous that very little of this gold is melted down, and as long as it does not pay to melt sovereigns down, very little will be. More probably is lost to the Punjab in remittances across the land frontiers or to other provinces, but the great bulk of the £8 millions sterling, more or less, absorbed in gold in the last decade is probably held in the province. The sovereign is everywhere now accepted in payment of dues and is, indeed, eagerly sought after. Its stability, portability, indestructibility, and, above all, its freedom from the efforts of the counterfeiter have all contributed to its popularity, and if this condition is not now general throughout the Empire, the reason probably lies in the greater enterprise of the uneducated Punjabi and in the fact that in the various countries to which he penetrates he finds that the sovereign is universally accepted and universally stable in value. That the sovereign has become part of the active circulating medium of the province is not open to doubt; and it will, as stocks become available, displace the rupee to an increasing extent. Evidence is also forthcoming that for remittance and commercial purposes generally, the sovereign is displacing the currency note, though the circulation of currency notes under the influence of expanding trade is actually increasing at present. A large proportion of the gold received finds its way into the accumulations of savings held by private persons in the province, where it is replacing the silver hitherto hoarded. These accumulations, though of uncertain, are of considerable, extent, and the fact that they are in an increasing degree being held in gold affords additional security for the stability of the rupee. The gold in these hoards is temporarily withdrawn from circulation, but the hoards are continually changing hands as the possessor finds occasion to employ them on some specific object—a marriage, a new house, a law suit, an estate, a loan, or the like—and until the system of banking and commercial credit is more thoroughly developed, large stores of coin must continue in this way to be temporarily withdrawn from circulation. The consumption of the precious metals is not confined to minted coin only. There is no return of imports of gold bullion, but the imports of silver bullion average over £1,000,000 annually.

Rise in Urban Land Values.—Except in the large towns, until recently such urban land as changed hands probably sold at values depending more on custom than on any economic basis. Of late years, however, several causes have contributed to widen the gap between the old customary values and the true economic price of urban land, with the result that much higher prices are now demanded and paid for urban sites than formerly. It is not possible usually to do more than roughly decide where the true urban area merges into the suburban area and again where the latter becomes agricultural land, but different causes do in practice affect the price of land in each area. One cause, the diminished purchasing power of the rupee, has indeed influenced all land values, but the operation of the Land Alienation Act has undoubtedly operated to keep down the price of agricultural land and to raise that of urban and suburban sites. The causes which have contributed, in spite of this tendency, to raise the price of agricultural land to a higher level than previously experienced are discussed elsewhere. Since the purchase of agricultural land has practically ceased to furnish an investment for the surplus funds of any but the agricultural classes, more money has been available for the development of industries and trade; and more attention has been paid by townspeople to the improvement of their surroundings. The

introduction of a new line of railway has of course in many cases led to an immediate increase in the prosperity of individual towns, but practically everywhere in the province the demand for land for factories and other commercial purposes, the influx of labourers into towns, and the desire and means to pay for better and better ventilated houses have led to an astonishing rise in the value of urban land. Possibly the alleged waning of the joint family system may also be a contributory cause. The increase in the actual size of the town areas has probably been far greater during the last decade than the figures for population alone would indicate. On the other hand, plague has accelerated, among those who can afford to do so, the tendency to migrate from urban to suburban areas, which in the experience of all countries is the result of a long period of freedom from internal strife coupled with an increase of wealth and prosperity. Large as has been the rise in urban values, the increase in the value of suburban land has undoubtedly been much greater. The successful business or professional man now frequently lives in the suburbs of his town, where he is able to house himself more in accordance with the position which he has acquired, and to surround himself and his family with amenities which the cramped conditions of city life do not permit. In the nature of the case it is impossible to obtain accurate statistical information of the extent of the rise of land values in city and suburban areas in the past decade, but it is not unlikely that, generally speaking, a rise of 300 per cent. can be confidently asserted for urban, and anything up to 1,000 per cent. for suburban land. Sites in Lahore that sold eight years ago for £270 are now valued by the courts at £3,730.

Education.—The progress of education has been rapid and continuous. Collegiate education has been greatly benefited by the Universities Act of 1904, and the colleges, spurred on by the requirements of the law and by the increased supervision of the University authorities, no less than by the wise liberality of Government grants, have reached a high standard. At the other end of the scale, primary education, though hampered by the lack of proper teachers, has made great strides under official encouragement and the prospect of further development, under local management, through grants-in-aid is not without hope. Under secondary education there is less cause for satisfaction. The constant pressure towards an English education in the middle school is difficult to resist, though the best education authorities are unanimous in the opinion that the students who have taken the longer course through the vernacular middle school are the best equipped both for immediate employment and for the prosecution of further studies. The broadening of the educational horizon has proceeded to some distance. The Arts degree is still, of course, the most sought after, but the law college has lost some of its previous popularity. The Punjab has long had well-equipped medical and veterinary colleges; to these have now been added colleges of agriculture and engineering. Science has been consistently fostered in the Government college and in the secondary schools clerical and commercial as well as science courses have been prescribed. The prejudice against the education of women appears to be weakening, and the progress of female education in recent years has been rapid. Even so, no more than one woman in 146 was found to be literate at the last census in the Hindu community, and one in 531 among Muhammadans.

Moral Progress.—The activities of missionary enterprise are becoming of increasing importance throughout the province, and it is not open to doubt that a great advance has been made in recent years. It is not meant that dogmatic Christianity has made any great strides, for the total Christian population is still far short of 1 per cent. of the whole, nor is any great forward movement in this respect probable. Nevertheless, the ideals associated with, though by no means the monopoly of, the Christian faith, have permeated far through the community. The attacks of dogma have had a bracing effect on the teachings of the other faiths, and, inasmuch as morality cannot be divorced from religion, the result cannot but be productive of true moral progress. Efforts are being made by every community to explain the philosophical nature of their respective religious precepts and to bring religious teaching into harmony with modern science. It is perhaps in the domain of female education that Christian ideals have found the most striking approval, but signs are not wanting, in the institution of temperance associations and of denominational schools, in the development of games and healthy exercise, and in many other directions, that it is being increasingly recognised that the duty of the individual, no less to himself than to the State, does not end with the amassing of material wealth.

(Punjab.)

Conclusion.—Ten years is a short span in the history of the development of a country, and progress that cannot be gauged by scale and measure is sometimes hardly perceptible in the brief years of a decade. Of lack of statistics, however, India cannot complain, and across each page is writ large the record of progress in the Punjab. Though for a time the ravages of disease have caused a set-back in the figures recorded at the recent census, vital statistics show us that the leeway made in the previous ten years has almost been regained in the one that has since passed. Of material progress indeed there are on every hand abundant signs. All sections of the community are from year to year better housed, better clothed, better fed. In the less tangible domain of moral progress, there is also much cause for satisfaction. A growth of self-respect in the labouring classes is clearly observable. The labourer has been able to share to the full the general rise in material wealth, owing to the demand having far outrun a supply attenuated by the ravages of plague. This independence of attitude has to some extent dislocated rural society, but the process is gradual and the rural employer has time to adapt himself to the altered circumstances. Among all classes the increased means have not been accompanied by a proportionate development of the rational enjoyment of leisure. The Jat, if his religion does not forbid him, spends more time with the bottle, and too many find in the excitement of the law courts their only recreation. To the educated, politics have an unfailing attraction. A distinct problem confronts society here. Enthusiasm for sports and pastimes, and a taste for literature and the arts, are plants of slow growth, but are essential to the moral development of a people. Of the former there are distinct signs of progress; except among the few there is at present little or no promise of the latter.

North-West Frontier Province.

Population.—The population of the North-West Frontier Province has risen from 2,125,000 to 3,819,000 within the decade under review, an increase of 79·7 per cent. The census figures for 1911, however, include population in the political agencies and tribal areas, *i.e.*, 1,084,824 in the agencies, 519,441 in the tribal areas, and 4,291 temporary canal labourers in the Malakand agency. Excluding these, the actual increase in the provincial figure as compared with 1901 is 85,000, or 4 per cent., and this is spread over all the districts. The urban population is now 292,000, or one-thirteenth of the total, against 270,000, or one-eighth, in 1901; but here again the figures are somewhat misleading. Excluding political agencies and tribal areas there has been an increase of about 20,000. The high wages to be earned in towns have attracted a considerable influx of casual labourers from the country sides and greater security of life and property has induced many rich Hindus and others to take up their permanent abodes in the towns. The increase in the rural population is less marked, the growth of the agricultural population being greatly retarded by the arduous conditions under which it lives, especially in the three southern districts of the province. The province was generally immune from plague, famine, or war within its boundaries, but two short successful expeditions were undertaken in 1908 against the Zakka Khel Afridis and the Mohmands across the Peshawar border.

Agriculture.—The area under cultivation amounted to 2,776,000 acres against 2,631,000 acres, giving an average of 1·1 acres per head of the total, and of nearly 1·3 acres per head of the rural, population. The opening of the Paharpur Canal in the Dera Ismail Khan district in the year 1907 has partially secured an area of some 50,000 acres, and a scheme is now under consideration for damming the Gumal river and thus securing a large area in the heart of the Dera Ismail Khan district at present dependent entirely on hill torrent floods, which owing to their volume and uncertain arrival often cause widespread damage or prove useless by reason of their superabundance. The irrigated area in the Peshawar district has risen by 122,500 acres.

An important canal now under construction, designated the Upper Swat River Canal, takes out from the Swat river between Chakdarra and Malakand, and after being tunnelled through the Malakand Pass will bring water into Sam Ranizai and the Peshawar district. The gross area to be commanded by this canal is estimated at 448,895 acres, mostly in the Peshawar district.

An agricultural farm was started in the Peshawar district in 1910, with a European superintendent, aided by four trained agricultural assistants. Considerable

success has already been achieved, and the experiments that have been made in respect both to agriculture and horticulture have proved popular and instructive. Local *zamindars* evince much interest in the demonstrations of the uses of foreign agricultural implements and for these the demand is rapidly increasing.

Kohat is the only district in the province that is not self-supporting. Its population is now 223,140; the total outturn of the harvested crops has been estimated at 1,506,521 maunds, whereas the total consumption of food-grains amounts to 2,008,260 maunds approximately. A large percentage of the population is therefore dependent on imports; no difficulty, however, has been experienced in obtaining the requisite supplies.

The area cultivated by tenants has again risen; it was 50 per cent. in 1901, and is now 54 per cent. in 1911. This increase is at the expense of that cultivated by the proprietors themselves, but this is merely a proof of increasing prosperity and can be regarded with equanimity. The Pathan is notoriously averse to working if he can afford to pay another to work for him. The Punjab Alienation of Land Act, XIII. of 1900, was introduced into the Hazara, Bannu, and Dera Ismail Khan districts in 1904. The Act is not on the whole unpopular with the agricultural classes, and it has undoubtedly prevented much land from passing out of their hands into those of Bannias and money-lenders, while as far as can be said at present it has not operated harshly, although it must to some extent account for the increase in the floating debt.

Rents are taken both in cash and kind; the commonest rate of rent in kind is half or one-third. The dues of village menials are still determined by custom and have remained stationary.

Nowhere in the province have famine conditions prevailed within the last ten years. The rainfall was, on the whole, fair, and there have been no successions of bad years in any district. More than 27 per cent. of the cultivation is secured by irrigation; Marwat, in Bannu, and the Daman, in Dera Ismail Khan, are the only "insecure" tracts; in these localities the people in bad seasons move temporarily with their cattle to less stricken parts of the same or a neighbouring district.

Indebtedness of Agricultural Classes.—The floating debt has again increased. The introduction of the Land Alienation Act has not improved the situation in Hazara, Bannu, and Dera Ismail Khan. Land being no longer available as security for loans, rates of interest have increased and vary between 12 per cent. and 75 per cent. When interest is paid in grain it is ordinarily cent. per cent. It was anticipated that this condition would be partially adjusted by a curtailment of expenditure on unreproductive ceremonials or excessive hospitality, but this anticipation has not been realised. The general level of prices of agricultural products has risen appreciably throughout the province, but the *zamindar* has benefited little thereby; as a general rule cultivators are hopelessly unenterprising and conservative, and they are too much governed by force of habit to take advantage of an altered situation. The majority is indebted to the local Hindu shopkeepers. In certain parts, whether the cultivator is in debt or not, the Bannia takes over the whole of the tenant's share of the produce at the threshing floor, merely crediting the man's account with the value calculated at low harvest prices; later on the *zamindar* indents upon him for grain to feed himself and his family, and eventually also for sowing; the cost of such grain is not, however, debited at harvest prices, but at the rate prevalent at the date of the transaction, and this, it can be readily understood, is more often than not greatly to the disadvantage of the cultivator. Agricultural banks were given trial in the province, but they proved complete failures and have been abandoned for the present.

Prices and Wages.—Prices of food-stuffs have risen by about 20 per cent. during the decade. The increases in prices and wages have been general, and are the natural result of growth in population, of easier access to markets, and of improvements in means of communication, while the demand for labour has gone up enormously. The average daily wage of a coolie in 1901 was from 3 annas to 5 annas a day, whereas it is now nowhere lower than 8 annas per diem; the increase in his case, however, merely keeps pace with that in prices. The skilled labourer on the other hand can now command a handsome wage, and reaps full profit from the rise in wages; but persons with small fixed incomes, mostly Government servants, are, if anything, relatively worse off than they were ten years ago.

(North-West Frontier Province.)

Industrial Development.—An experiment in rearing silk-worms was made in Hazara, but proved a failure. A flour-mill was started in Bannu and a sugar factory at Peshawar, but neither has made much headway. There has, in fact, been little material change in industrial conditions, cotton-ginning, oil-pressing, ice-making, &c., continuing much as before, but making no strides. The construction of wheeled vehicles has become a considerable industry, but indigenous industries such as weaving, shoemaking, pottery, and the manufacture of gold thread have been almost annihilated by foreign competition. Pottery in particular has suffered, and has been replaced by cheap glass and enamel-ware.

Trade.—The volume of trade with foreign countries has advanced considerably. This is due to the general rise in prosperity, improvements in the way of communications and markets, the birth of new wants side by side with facilities for their gratification, and to a general and well-marked development consequent upon greater peace on the border. New railway lines are now under construction in the Hazara and Bannu districts, and these will undoubtedly further accelerate the progress of trade in those districts.

Standard of Living.—With the spread of education and the general advancement of prosperity the people now affect more commodious and better furnished houses, especially in towns and larger villages. Well-to-do landholders and merchants wear better clothes, and there is a general tendency amongst them to adopt European fashions and to use European piece-goods. Taste and facilities of communication have brought various luxuries of diet within desire and reach, and the better classes now purchase more costly, if less massive, jewellery, golden ornaments largely replacing silver. There is, moreover, a marked increase in expenditure upon such luxuries as tea, sugar, and cigarettes, while in spite of all efforts upon the part of Government the expenses incurred upon occasions of betrothals, marriages, and the like remain, except in rare cases, unnecessarily extravagant; and there is reason to believe that the consumption of liquors and drugs is increasing quite out of proportion to the increase in population.

Moral Progress.—(a) *Education.*—There has been some improvement in the matter of education in the decennium under report. The number of schools of all kinds and attendance have increased; this is due to the gradual process of civilisation and to greater departmental energy. Primary education throughout the province has recently been made free, and efforts are being made to ensure that there shall be a primary school within reasonable distance of every village. The more intelligent classes of the population are exhibiting a thorough appreciation of the advantages of education, but so far it cannot be claimed that education has had any striking effect upon the general masses, who remain as backward and supine as before. Some interest in female education is being evinced, but it is so far confined to the towns.

(b) *Crime.*—Crime in general has remained much as it was presented in 1901, but a regrettable feature is to be noticed in the tendency for crime of the more violent types to expand. In Kohat the moral condition perhaps shows least progress. Murders, dacoities, and other heinous offences are still common there and in fact show a slight increase. Three fanatical outrages occurred in Bannu, of which one was fatal. Such outrages are, however, mainly dictated by transborder influences, and are bitterly resented by the leading Muhammadans in the province. Serious crime in Dera Ismail Khan has been practically stationary, but Peshawar and Hazara display no improvement, and upon the whole it cannot be contended that the past ten years have brought about any greater reverence for the forces of law and order. Violent crime has, however, largely decreased in the Tochi and Kurram agencies.

(c) *Litigation.*—The number of civil suits increased from 19,515 in 1901 to 23,927 in 1911, while revenue cases fell from 20,008 to 18,747. The provincial average of such institutions per 10,000 inhabitants is 109; this is considerably in excess of that in the Punjab, which stood at 93 in 1910. The high ratio demonstrates the extraordinarily litigious propensities of a large portion of the population of this province, but these are merely the expression of certain well-marked traits in its character.

(d) *Position of Women.*—The social position of women remains much the same as before. Amongst the educated classes women are now accorded more considerate treatment, but amongst the lower grades they are still regarded as mere chattels and

(North-West Frontier Province.)

property to be freely bought and sold. The effect of the small beginnings that have been made with female education will not be evidenced for some considerable time.

(e) *Conclusion.*—The retrospect is not perhaps altogether favourable, but there are not wanting signs of a gradual awakening, and with the general rise in prosperity and the undoubtedly increasing interest in education, coupled with the extension of communications with the outer world, there is good reason to look forward to the future with hope and confidence. That the people have prospered and are prospering under our rule, even if the progress is slow, cannot be doubted, while any comparison between their condition and that of the Pathan communities across the border, their allied tribes, can be contemplated with satisfaction if not with some pride.

Central Provinces and Berar.

Introductory and Descriptive.—The Central Provinces and Berar are primarily an agricultural tract, but not more completely so than the rest of India. Like the rest of India, the province contains wide and fertile plains which grow not merely food for the cultivator, but freight for the railways and materials for the busy manufactures of India and the rest of the world. There are areas of valuable forest and wild and barren mountains, while beneath the earth are deposits of minerals. It contains large cities, where some proportion, perhaps not a large one, of the locally-grown cotton or oil-seeds, hides, or timber are worked into manufactured products. Among its population are millions of illiterate aborigines, together with a large and important educated class, containing some of the keenest intellects in India. In marshalling facts and figures for a consideration of the economic or social progress of the country, therefore, the province must be allowed to take its place as fully typical of the rest of the Indian Empire, and must not be regarded entirely as a backward tract, lying outside the lines of progress along which the country as a whole is moving.

To those who may have read the two previous reports on the moral and material progress of the province, the contrast of the three periods dealt with therein and in the present report is very striking. As was recently pointed out by a late Chief Commissioner of these provinces, the progress during the first period was one of quantity rather than of quality. The cultivator added acre to acre of cultivated area, but he neither improved his methods nor increased his security against famine, nor—most important of all—was he led to consider whether the financial conditions under which he worked were not susceptible of complete alteration and improvement. This blind adherence to custom, fostered by prosperity, had characterised the attitude of the people since the earliest times; changes had been slow, and the effect of the contact with western ideas had so far seemed to be of the slightest. The next period, from 1891–92 to 1901–02, was one of severe and repeated reverses. The people of the province were to emerge from these into an epoch not only bright with prosperity, but illuminated with glimmerings of the light of self-consciousness and self-realisation.

Many causes contributed to this end. Besides the stress of famine and plague, the striking lesson of the Japanese war had had a sudden and very marked effect on the popular imagination; while the educational policy of Government in the past, as well as the general improvement of the administration, by a gradually accumulating influence affecting social and economic conditions, had begun at last to act on the national sentiment. This important question can hardly be dealt with adequately, except in great detail. Suffice it to say here, that the new spirit made itself apparent in many ways. The cultivator showed himself more ready to listen to the teachers of improved agricultural or financial methods, and less prepared to submit passively to village customs which had long ceased to be useful. The labourer was more ready to seek work in distant districts—not merely under stress of famine, but with the hope of an anna or two higher wages. The same spirit of self-realisation that gave rise to the attempt on the part of the Brahminical classes to re-assert their waning supremacy, often by politically undesirable means, taught the Kunbi to claim religious equality and to reject Brahminical supremacy. The literary classes began to show a desire, for the adequate fulfilment of which, unfortunately, they have as yet neither the technical skill nor the command of capital, to make their country, as far as possible, independent of seasonal fluctuations, and to secure for her sons a greater share in the exploitation of her material resources. The same spirit inspired hot-headed youths or disappointed seniors to seditious attempts, but it was also the source of the demand among educated

and responsible Indians for a greater share in the government of the country. Every great change must bring some evil with it as well as good, but no one dare say that the new spirit has not brought to India an amount of good which vastly outweighs the evil.

The salient events in the provincial history of the period were the accession of Berar to the province in 1903, the construction of the Satpura and other narrow-gauge railways between the years 1901 and 1907, and the energetic irrigation policy pursued by Government since the famine of 1907. The effects of the first have not yet fully shown themselves; one of them has been a shifting of the political and economic balance of the province to an even greater extent than before in favour of the Maratha tract and Nagpur; another, a large addition to the Government revenues, leading to greater efficiency in administration; the third, an increased provincial interest in the valuable cotton crop, and in the industries which are concerned in its export and manufacture. The effect of the narrow-gauge lines has been the opening up to cultivation and the colonisation of areas hitherto undeveloped, and a great addition to the value of the national forest estate. The economic effect of the irrigation policy has been slight as yet, but it is destined to have important results in the future.

Economic Progress.—The economic development of the province has certainly been the most striking feature of the decade.

Prices and Wages.—The rise in prices and in wages is a point that at once arrests attention. The prices of the staple food-grains—wheat, rice, and *juar* (millet)—stood at almost the same average figure during this decennium with six good years and only a single bad one, as during the last, which contained two years of complete crop failure and only two really good years. In spite of prices hitherto associated only with years of famine, which would, not many years ago, have sent swarms of starving wanderers to beg or die along the village roads and in the cities, the present is a time of the greatest prosperity for the working classes.

The causes of this are simple. There has been a diminution in the supply of labour and an increase in the demand for it. The decline in population exhibited in the census of 1901 was 8·3 per cent., and it is clear that these famine losses must have been almost entirely confined to the labouring classes. Since then, plague has been active among the fluid labour population of the towns. Losses from this cause have averaged 1·46 per 1,000 per annum, with a total death roll of nearly 250,000 during the decade. The demand for labour, on the other hand, has greatly expanded. The cropped area of the Central Provinces districts has increased from just under 15 million acres to 17¾ millions. The expenditure on Public Works during the preceding decennium (omitting famine works) was £1,270,000; between 1902 and 1911 it amounted to £3,980,000. The expenditure on railway construction during the period from 1902–11 was £2,790,000. And though similar figures are not available for the preceding decennium, it seems probable that the expenditure fell far short of a third of this sum. Two and three-quarter million tons of manganese were mined during the last 10 years at an average cost of Rs. 1.8.0 to Rs. 4 per ton. There were 244 factories (mostly small cotton gins) in 1901 with 29,000 employés; in 1910 there were 409 with nearly 40,000 employés. The increase in private building enterprise has been great, though statistics regarding it do not exist. It is hardly surprising, then, that the rise in wages has been considerable. Field labour was paid at the rate of 3 annas a day at the beginning of the period; it is now impossible to obtain coolies in an average district at less than 4 annas; while the rates for weeding in Berar have risen from 3 or 4 annas to 5 to 8 annas according to the character of the season. The opening of manganese mines in the district of Balaghat raised the rate of labour within three or four years from 1½ annas a day to 3 or 4 annas over large areas. Labour in cotton gins receives 5 or 6 annas a day instead of 4 annas. When it is considered how much more freely labour moves at present than was once the case, how during the famine in 1897 villagers lay starving in their houses a mile or two from a relief work, while to-day labourers from Chhattisgarh are to be found on the railways of Bengal and Assam and by the docksides of Calcutta, it is perhaps remarkable that wages have not risen even higher. The main increase took place before 1905, and since then there has been little general increase, though instances are to be found where an unusual temporary demand has pushed the rate of wages up to figures previously unknown. Though employers still complain of the indolence and inefficiency of the Indian coolie, yet those most experienced in the management of local labour are of the opinion that its efficiency has increased; the higher rates have made the coolie

(Central Provinces and Berar.)

physically stronger and more self-respecting, and his paymasters more exacting. The system of famine relief accustomed the labouring classes to piece-work, and they are now more willing to add to their earnings by harder work.

The population, after falling from 14,761,534 to 13,602,592 between 1891 and 1901, rose to 16,033,310 at the census of 1911. But the proportion of children under 10 in 1901 was only 27 per cent. of the total; in 1911, it is 29 per cent., and if the comparison is restricted to the Central Provinces proper, 30 per cent. Until these children have reached years of maturity, the increase in population will not materially help the labour supply.

Trade.—The most striking features of the trade returns have been the steady rise in imports, and the increased value of the exports of cotton. Imports have risen from £5,700,000 to £7,700,000. Exports have increased in value from nearly £9,300,000 to more than £12,300,000. The rise in the one case has been very closely proportionate to the rise in the other. The value of cotton exported in 1902–03 was £3,300,000; in 1911–12 it stood at about £8,000,000. The actual quantity exported shows no such marked increase, but prices have risen greatly. The wheat trade does not yet stand where it did before. But the four million acres of wheat grown by the cultivators of the Central Provinces proper, before the famine cycle, represent an area exaggerated by the relatively high price of wheat and by wet seasons which had brought cotton and *juari* somewhat into disfavour. The present wheat area, a little in excess of three million acres, represents fairly enough the best capacities of the wheat soils of the province, under present conditions of prices and agriculture. The total of an Indian crop is still very difficult to calculate from the amounts that come into sight week by week, owing to the variety of considerations that affect the cultivator's desire to sell. Such an occurrence as Halley's comet caused a holding up of food-grains on a very large scale. The articles imported denote in an ever-increasing degree a rise in the standard of comfort. There is not a town deserving the name without two or three bicycles; not a large village without its sewing machines; gramophones are often heard enlivening the monotony of a village evening, or the tedium of a railway journey. Books are now frequently purchased by Indian travellers to read in the train. Rosy, if tasteless, apples are commonly sold in the bazars of the prosperous towns of the cotton country.

Communications.—The activity of railway transport necessarily bears a close relation to the number of carts available for bringing produce to the stations. The best measure of this is the proportion borne by the number of carts to the number of ploughs in a district. The highest proportion naturally exists in the cotton tracts, where there are often more carts than ploughs; while it falls as low as one cart to 10 ploughs in Jubbulpore, where most of the export trade is carried by pack animals. Even in this and other northern districts the proportion of carts to ploughs has considerably increased during the decade, and over the province as a whole it has risen from 2½ ploughs to a cart to less than two ploughs. The cost of carting, owing to the cotton traffic, the manganese export, and the general activity in building, has greatly increased. The rates in Nagpur, for instance, have gone up in 14 years from 8 to 20 annas a day.

The population of the province have become much more frequent travellers. During the four years just preceding the year 1892, the average number of railway tickets issued per head of population was ·24; in 1911 it was ·73.

The Satpura railway has opened up a tract the produce of which has hitherto had to reach the railway over steep ghats and scores of miles of road. The increased activity of trade may be judged from the fact that in districts opened up by the railway the fraction of civil suits per head of population is 50 per cent. higher than ten years ago, though the increase in the rest of the Central Provinces proper has been inappreciable.

The Agricultural Classes.—*Agricultural Conditions.*—The agricultural progress of the period may be described very briefly. Taking 100 to represent a normal crop on a normal area, the figure reached by the crops of the decade is 88; in view, however, of the general tendency to under-estimate outturns in prosperous years, this figure is perhaps too low. The corresponding figure for the preceding decade was 73, and this, owing to the large number of bad years, represents more correctly the real conditions of the period. The net cropped area for the Central Provinces proper reached a maximum of 15,900,000 acres before the beginning of the famine cycle; it

now stands at 17,700,000 acres. The net cropped area for the whole province has increased during the decade from 24,100,000 to 24,900,000 acres. The cotton area has expanded from 3,900,000 to 4,481,000 acres. All crops, excepting wheat, have recovered their normal area. The number of cropped acres per plough animal averaged 6 during the period between 1892 and 1901; during the last decade there were on an average 4 acres to each plough animal. The average incidence of rural population per cropped acre is 1·27 acres per head; in the preceding decade it was 1·29 acres; thus population bears much the same relation as before to the cultivated area; the methods of cultivation are the same, and the economic results of the work of the Irrigation and Agricultural Departments have yet to show themselves. It would require a very detailed examination of their working year by year from their beginning to make visible the hopeful signs which are justifying the anticipations on which these departments were formed; here it must suffice to say that those who are in closest contact with their workings, whether private persons or officials, are the most confident of the great possibilities that they contain for the people of the province. If a proof of this is wanted, it may be found in the increased price of land commanded by irrigation works in Chhattisgarh.

The famine cycle has left a few marks on the agricultural practice of the province. The extension in the wheat embankments of the Nerbudda Valley and Chhattisgarh, the increase in the irrigation wells of Nimar and the tanks of Chhattisgarh, and in the stone and brush-wood works for the prevention of erosion that are now so common in the cotton country, are all due to a desire on the part of the people to secure themselves as far as possible against famine losses.

Landholders, Tenants, and Land Tenure.—There is no doubt that the landlords suffered more severely than the tenants from the effects of the famines. But the past decade has seen a complete recovery in both cases. Though rents are now paid as promptly as at any period, the position of the landlord has been weakened by the breaking away from custom that has formed so significant a feature in village life. There has been little change in the proportion of the area held as home-farm to that held by tenants; the increase of the former has been arrested by bad years and the rise in wages; and the same cause has tended to make the landlord treat the small holders, who provide much of the village labour, with more consideration. The average tenant holding has decreased in size during the decade from 11·7 acres to 10·5 acres. The rise in prices and prosperous years have offered great possibilities of rental enhancement. Very little, however, has taken place. The average rent-rate in the Central Provinces has only risen from 12 to 13 annas per acre. Till within the last 10 or 15 years, landlords freely and often arbitrarily enhanced the rents of tenants. Now, although the tenancy law has been amended with a view to facilitating and regularising rental enhancement, landlords prefer to re-let on existing rents, taking heavy premia, which are beyond the reach of assessing officers. The position of the cultivating classes has undoubtedly been improved by the prompter and more liberal suspensions and remissions of revenue, which have been rendered possible by a more efficient revenue staff and more accurate records.

Berar is a country where by far the larger proportion of the cultivators hold direct from Government as peasant proprietors. Hitherto this division has had no record of rights; the creation of this has now been taken in hand, and will, it is hoped, facilitate revenue work and give a more assured basis for judicial decisions, while the greater certainty of the creditor as to the borrower's title should make for cheaper money.

Famine.—Though in the earlier part of the decade there were one or two years of poor crops and local scarcity, the year 1907–08 was the only occasion when anything approaching a general failure of the crops took place. In this year the average outturn for the province was reported as only 53 per cent. of a normal crop. But the power of resistance displayed by the people was a proof of the improved economic conditions of the province. The demand for employment, agricultural or other, fell off so little, that the Administration found it unnecessary to introduce any general system of famine relief, and successfully coped with such distress as existed by an expansion of the regular programme of public works and by liberal suspensions and remissions of the land revenue demand, supplemented by large advances of agricultural and land improvement loans. The crop outturns of the Bhandara district in the years of 1896–97 and 1907–08 were represented by the percentages of 42 and 41 respectively. In the former year 42,000 persons were at one time on relief; in the latter year, extra employment had to be provided for 3,560 only.

(Central Provinces and Berar.)

Indebtedness.—That the cultivator is as a rule indebted is not surprising when one considers the fluctuations in value of the crops on which he depends, even in non-famine years. In one year, the cotton exports of the province were valued at £3,070,000; in the next year, at £7,410,000. The function of the money-lender has for ages been a very necessary one; he absorbed most of the surplus of good years, and made it available (at any rate for the thrifty and well-to-do) in bad ones. When he changed his rôle, and misused his position by acquiring large areas of landed property, he ceased to fulfil a useful function. The famine years, with their heavy losses, compelled him to restrict his desire for land; and the rise in the cost of labour has accentuated the effects of the famine. The money-lenders themselves realised that to retain their claims over impoverished debtors or to seize their land was alike unprofitable. This cause, together with the religious and charitable sentiments that distinguish many of the money-lending castes, rendered possible the debt conciliation policy which was undertaken between the years 1898 and 1905, and in three districts alone resulted in the wiping off of £700,000 with the consent of the creditors. But such action as this was remedial only; a positive policy that could of itself supply a stimulus to thrift and self-improvement was required. This, it is hoped, has been found in co-operative credit. Starting in the year 1905, with a few small societies commanding only a few hundred rupees of working capital, it can point to-day to 585 societies, with a turn-over of nearly £100,000. The movement has survived one year of severe scarcity, without much difficulty; and it seems destined to revolutionise many other features of rural life besides its finance.

Rural Life.—Old customs based on ideas once appropriate to the village economy, but now no longer applicable, are beginning to lose their force. The theory of the self-contained village, with its dependent fringe of non-cultivating artisans and servants, is breaking down. The cultivator is refusing to allow the menial castes to take away the hides of his dead cattle, now a valuable product. The village artisan is finding that the towns offer him better wages; where he is not tied to the village by the possession of land, he is leaving it, and where he stays he is raising his charges.

Relations between landlord and tenant tend to become more purely economic. The practice of unpaid customary labour for the landlord is dying out, and with the increased wages for paid labour there is a marked tendency to restrict the extension of the home-farm, and to give out land on premia or cash leases; a policy much the same, in fact, as that which landlords were compelled to adopt in England and elsewhere after the black death had denuded the village of its labourers or small cultivators.

Industrial and Commercial.—*Mill Industries.*—The number of cotton gins has increased and one or two more cotton mills have been opened; but the only new manufactures that have been started consist of two match factories, of which one is doing fairly well, while the other is no longer working; a glass factory, which has not yet attained the security of commercial success; one large and three or four small oil mills, which can, however, obtain no local sale for their cake; and a large pottery. There is a general complaint that indigenous company management is not as yet successful. The literary and commercial classes of the province, though of acute intellect and fully qualified to succeed in enterprises for which custom has fitted them, have not yet acquired the "joint-stock habit," and are too apt to subordinate the common good and the requirements of sound finance to personal and immediate interests.

The Artisan.—The decline in domestic weaving shows as yet but little signs of arresting its course. The number of persons dependent on weaving and its subsidiary operations for a livelihood was 729,000 in 1891; in 1901 it had fallen to 469,000, and at the recent census to 390,000.

Potters, however, were not much affected by the famines, and their numbers now stand at 68,000, against 74,000 in 1891. Leather workers, after declining in number from 169,000 to 116,000 between 1891 and 1901, have now increased to 127,000. The carpenter and the blacksmith are in ever-increasing demand, and cultivators complain bitterly of the way in which skilled craftsmen are deserting the villages for the towns and the mills. Bad finance is at the root of much of the decline in domestic manufactures. Co-operative credit has only recently been extended to industrial societies, but it has already shown that cheap credit reduces so greatly the cost of his raw materials to the worker as to make a substantial difference in his earnings. Unless,

however, some new factor such as better finance or an improved loom steps in to arrest the decay of weaving, the wages of some classes of weavers already compare so unfavourably with those earned by unskilled labour as to make it clear that at no distant date few domestic weavers will be left, save the makers of solid bordered cloth, in the production of which power looms have not yet been able to compete with hand looms.

Public Welfare and Progress.—*Social Conditions.*—A spirit of greater liberality among the more educated castes has accompanied a tendency to greater rigidity on the part of lower castes who have recently become prosperous. The general effect of both has usually been beneficial. More than one caste has abandoned spirituous liquors; and there is no doubt that more stringent caste restrictions make in favour of higher sexual morality. Among the higher castes, the intemperance which at first accompanied the relaxation of caste restrictions has to some extent disappeared, and the better and more sanitary habits of life, the pursuit of more healthy, more civilised and more intellectual pleasures, which have led to the founding of numerous literary, athletic, and social clubs among the educated classes, and the gradual emancipation of women, as evidenced by the partial removal of purdah restrictions and the founding of ladies' clubs and of classes for domestic instruction, are all signs of real progress. Teetotal movements, in some cases caste, in others political, have been not infrequent, and have in nearly all cases left behind them some residue of a real feeling in favour of greater temperance. Instances have not been wanting of cases where Brahmins have postponed the marriage of their daughters till they reached a reasonable age, or have even in one or two cases allowed them to enter liberal professions. The Maratha Kunbi caste movement is significant. A desire to make themselves independent of Brahminical religious ascendency has been fostered by education, and the movement is already a powerful one and seems likely to extend to other castes.

Disease and Sanitation.—The economic effects of bubonic plague have been already described. In the towns, it has induced the middle and higher classes to move into suburban residences with lighter and more airy rooms than the old style of native house. After much opposition, a stage has been reached at which the people are ready to evacuate their houses at the first warning, except in the case, perhaps, of the weaving castes; and an increasing proportion are prepared to be inoculated. Public attention has gradually been aroused to the fact that, though an improved water supply has prevented cholera in towns, yet it has hitherto been usually accompanied by a rise in the death-rate, owing to the absence of drainage and the consequent increase in febrile diseases. Extensive drainage schemes are now under preparation or construction for most of the principal cities of the province. The horrors of the indigenous milk supply, in its transition from the domestic to the professional stage, have aroused strong feeling among the more enlightened classes, and it is probable that a better dairy system will soon be evolved, with the result of lessening, it may be hoped, the appallingly high infant mortality.

Education.—Nowhere has the conscious desire for progress been so clearly shown as in the increased readiness of parents to educate their children. The first few years of the decade witnessed a gradual recovery from the decline in the attendance at primary schools caused by the famines. About the year 1905, however, a great and spontaneous increase set in. This was due in some cases to caste revivals, especially in the case of aborigines, but, speaking generally, it may be ascribed to a greater appreciation of the benefits of education. The number of vernacular scholars rose from 153,000 at the beginning to nearly 300,000 at the close of the decade. The number of scholars learning English rose from 9,000 to 18,000. But mere figures do not represent the general improvement. In vernacular schools, trained and certificated masters have given an entirely different turn to the teaching and atmosphere of the school; and their arrival has almost invariably caused an increase in the attendance. In high schools and colleges, greater attention is now paid to the moral and physical well-being of the students. Well-managed hostels, organised games, more personal interest in the students on the part of the staff, have revolutionised the tone of college life. Technical education has been started too recently to enable any definite opinion to be passed as to its effects; judging from the experience of other parts of India, it is more likely to depend for support on existing industries than to widen the field of industrial enterprise. But no one who has observed the effect of a

training in mechanics or mechanical engineering on Indian students can have any doubt as to the excellent mental discipline it furnishes; and it may be hoped that the extension and improvement of science teaching, which is now taking place, will add the practical belief in the results of scientific investigation, and the adherence to its methods, that is so much needed by the Indian educated classes.

Litigation and Crime.—The increase in civil litigation has been very slight, especially in the richer and more litigious districts. The number of pleaders has, on the other hand, greatly increased, and shows every sign of continuing to do so. Owing to the creation of a separate cadre for dealing with civil litigation, and to the appointment of officers with better legal training, suits are tried with more skill and care, although, save in Berar, with less promptitude in disposal.

The Insolvency Act of 1907 has proved of little help to creditors, and it is the debtors in almost every case who seek its help. Petty crime, due in most cases to famine conditions, has decreased, but professional criminals from outside as well as inside the province have been tempted by the increased wealth of the people to more frequent ventures. It is generally admitted that the reformed police staff are more honest and less oppressive in their working, and they are now beginning to evolve detective methods more consistent with modern ideas, and not incapable of coping with the more skilful and determined type of modern criminal.

Excise.—Although the number of shops for the sale of drugs and liquor has been very greatly reduced, and the duty rate enormously enhanced, the excise revenue has continued to increase. Excise receipts are bound to rise in proportion, not merely to the rise in wages of the drinking castes, but to the amount by which the wage received exceeds the cost of living, increased, it may be, by a rather higher standard of comfort. A rise in wages from 3 to 5 annas a day nearly trebles the coolie's liquor money. The rise in consumption, however, has not been large. Owing to the frequent changes in system, figures are not readily available, but in eight districts the consumption fell from 757,000 proof gallons in 1906-07 to 605,000 proof gallons in 1910-11. The rise in the cost of liquor has everywhere been very great. The area just round Balaghat town may be mentioned as a fair example. There the rate rose from 2 annas a bottle in 1903-04 to 5 annas in 1908-09.

Conclusion.—A heavy responsibility lies on Government in guiding and fostering the new spirit of progress. The tendency towards association and co-operation must be encouraged in finance and industry; a sense of responsibility and the need for joint endeavour must be developed in political life; and, by the provision of education and training suited to their needs, by legislative action where necessary, and by a watchful eye on such interests as may be inclined to take an unfair advantage of their wealth, social position or intellectual prestige, all classes of the population must be helped to develope their destiny along the lines best calculated to secure their own happiness and the prosperity and well-being of the country at large.

Burma.

Census Figures.—The population of Burma in 1901 was almost 10½ millions; in 1911 it had grown to 12,115,217. Of these totals the population dependent on pastoral and agricultural pursuits represented 67 per cent. in 1901 and 70 per cent. in 1911. This increase in the percentage is the natural result of the rapid extensions of cultivation that took place in the first portion of the decade. Ordinary cultivators, as distinct from landlords who merely receive rent, from the growers of special products, from the workers of impermanent clearings on the hillsides, and from breeders of stock, numbered in 1911 over 5,400,000 or 45 per cent. of the total inhabitants of the province. Of these, 3,800,000, or 32 per cent., comprise cultivating owners and their dependants; 1,600,000, or 13 per cent., are the corresponding figures for tenants. Field labourers, a term which means roughly the landless agriculturist, number almost 1,650,000, of whom 910,000 are workers and nearly 740,000 dependants. The number appears large, but is insufficient to provide one labourer for each three owners and tenants. Detailed comparison with the numbers of cultivators, tenants, and labourers ten years ago cannot be made, for the scheme of census classification has been radically changed. But in the aggregate the pastoral and agricultural population has risen by more than 1½ millions in the decade.

(Burma.)

General labourers and artisans are not enumerated as such in the census report. But if the terms be held to cover those who make a living in the preparation and supply of material substances, the number has risen from 2,300,000 to 2,400,000 and the proportion relative to the population has decreased from 22 to 20 per cent. The large quantity of Indian labour under this head is noticeable. Whereas in the agricultural population the Indian percentage is less than 3½, the number of natives of India engaged in industry, transport, and trade exceeds 13 per cent. of the aggregate so employed.

In Burma, however, there is little industrial specialisation of labour. Many non-agricultural occupations are carried on as subsidiary to agriculture, either by subordinate members of the agricultural household or by agriculturists themselves in the off season.

Agriculture.—The total area occupied for cultivation in 1901–02 was a little less than 13,900,000 acres; in 1911–12 it was over 17,400,000. The rise is large, over 25 per cent., but the rate of expansion has fallen materially in the latter part of the ten years. This fall was inevitable; the expansion which characterised the closing years of the last century was too intense to continue indefinitely. The causes of the change were the contraction of credit which accompanied the collapse of the land boom which raged during the first few years of the decade, the decrease in the area of land which could be brought under cultivation at little expense, and the more stringent administration of the regulations framed to prevent land from passing from the cultivating owner to the non-agriculturist landlord. A departure from the conservatism of Rangoon commerce, which in the past had limited itself almost exclusively, so far as agricultural produce is concerned, to rice, has led to the increased export and consequently the increased production of such agricultural produce as maize, peas, beans, and tobacco. The discovery of the drought-resisting qualities of the groundnut has led to a great increase of this crop in the dry zone of Upper Burma; and this increase has also been stimulated by the erection of mills to handle the crop commercially. The decade has, in fact, been marked by a great expansion in miscellaneous agricultural produce in satisfaction of a demand in the European market; while the large increase in competition in the rice business due to the entrance into the field of numerous Indian and Chinese merchants has diverted the attention of the European mercantile community to other agricultural products with advantageous results to the districts less favoured in the matter of rainfall than Lower Burma.

The opening of branch railways from Letpadan to Bassein and from Pegu to Moulmein has also considerably assisted in the expansion of trade and business, especially in rice.

In Upper Burma two only out of the past ten have been years of agricultural prosperity, while at least five seasons were marked by widespread failure of crops. But in no year was it necessary for Government to open relief works to combat scarcity. The causes of this immunity from famine are the development of the country, the introduction of new crops, the extension and improvement of systems of irrigation, and the improvement of communications.

In Lower Burma the food-supply is sufficient and scarcity is unknown. But cultivators are often obliged to sell their crops early in order to pay their debts to traders or money-lenders, who in turn send everything away for export—especially in years of high prices. As a result rice has often to be brought to the villages and re-bought at high prices, when the local stocks run short. The system of co-operative credit, which is rapidly expanding in Burma, will, it is hoped, give some relief in this direction.

The Development of Industries.—Agriculture and its allied pursuits provide occupation for by far the greater portion of the population, but the decade witnessed a marked advance in other directions. The factories in Lower Burma which fall within the scope of the Indian Factories Act rose from 172 in 1901 to 307 in 1911. Rice and saw-mills—the former greatly predominating—contributed all but a small portion of these totals. The appearance of competing firms resulted in a marked growth in the petroleum industry, and new oil-fields were discovered at Singu, in the Myingyan district, and near Mimbu town, where former workings had proved failures. The change of fashion has affected the prosperity of the ruby mines at Mogôk and despite extended workings the value of the rubies found in 1910 was little more than half

that of ten years before. Old Chinese workings in Bawdwin, in the Shan States, have been re-opened under European enterprise, and in 1910 nearly 30,000 tons of lead slag besides silver-lead ore were produced. The discovery of wolfram in the Tavoy and Mergui districts, where tin-mining still continues on a small scale, led to a great rush for concessions. A considerable amount of capital has been spent in dredging for gold in the rivers of the country, but so far the prospects are not encouraging. The coal-mine at Shwebo has been shut down. Cotton-ginning mills have sprung up at several centres in the dry-zone districts of Upper Burma, several of them containing also machinery for expressing oil from sesamum and from groundnut, the remarkable growth of which was a feature of the earlier part of the decade. Little change has taken place in the native household industries, but the silk weavers of Amarapura, near Mandalay, have improved the appearance of their fabric under stress of foreign competition. The Pegu-Martaban branch line of the Burma railways has rendered practicable the working of stone quarries in the Thatôn district. Two match factories have been erected at Rangoon and Mandalay respectively, and a start is about to be made in the manufacture of pulp from bamboo.

Prices and Wages.—The price of rice, the staple crop, which is now more than ever determined by the character of the harvests in other countries and by other external causes, has risen largely in the past ten years. At the beginning of the decade the market price at the opening of the season oscillated about Rs. 90, whereas in the past two years poor crops both in and outside Burma have raised the selling price at harvest to Rs. 120 or Rs. 130. To the cultivator the higher prices have offset the diminished crops, and so far his position is as good now as it was ten years ago. But independently of the rise in the price of paddy there has been some increase in the cost of necessaries, such as fish and fish paste, salt and oil, and thus in every class the cost of living has been enhanced.

During the ten years the translation from a natural to a money economy has made further progress. Most agricultural labour, however, is still paid in kind, and the field labourer's wages as measured in money have therefore risen in Lower Burma. In Upper Burma also agricultural wages tend to rise, owing to the increasing annual exodus of field labourers to Lower Burma.

Artisans who are paid in money are affected to a greater extent than the cultivator or the field labourer by the rise in the price of rice. For, though the occupations comprised under the heading "preparation and supply of material substances" are varied, and statistics of the wages earned in 1902 are in most cases not available, yet where, as in masonry and building, the wages at the beginning and end of the decade can be compared, there is no material increase to record.

General Condition and Standard of Living.—In the standard of living there are no very marked differences between the ordinary cultivator, the tenant, and the artisan. The ordinary cultivator fares perhaps a little more sumptuously than the tenant, but the expenditure of the field labourer is often on as lavish a scale as that of the tenant. How high the standard of living is in all classes may best be seen by consideration of the statistics of import trade. The port of Rangoon is a distributing centre for only 12 million people, whereas Calcutta serves at least 90 millions, yet in 1910–11 Rangoon imported more provisions than Calcutta to the extent of over 18 lakhs, while though the imports of apparel, liquor, matches, and earthenware are not so large in Rangoon as at Calcutta, yet the imports are out of all proportion to the population served.

The rapid expansion of cultivation in Lower Burma, which came to a close about 1906, was made possible only by the extensive use of borrowed capital. The collapse of the boom, where it did not result in the cultivator losing his land, has saddled him with a serious load of debt, which is now in process of liquidation. To aid the cultivator to stay on his holding co-operative credit societies have been established in several districts under the auspices and with the help of Government, and there are signs that the Burmese cultivators are also saving money in the co-operative thrift societies. The co-operative societies have as yet reached a very small fraction of the agricultural population, and they have been more successful in long-established than in newly-developed villages and in Upper than in Lower Burma.

Land Revenue System and Tenancy Law.—No important changes in the land revenue law have been made in the past ten years. In Lower Burma the conditions under which permission to occupy waste land is granted have been more rigidly enforced,

with a view to checking the transfer of land cleared and cultivated by natives of the province to alien non-agriculturists, who advance money on its security and foreclose on failure of repayment. In Upper Burma investigations by settlement officers have disclosed the existence in considerable areas of a communal tenure of land, and the customary incidents of such tenures have been preserved by rules and directions. Prolonged inquiries were made regarding the need for legislation to regulate the alienation of land and the conditions of tenancies, but no action has so far been taken in either direction.

The partial commutation of the *thathameda*, or tax on income, into a tax on land proceeded throughout the decade in Upper Burma, and all the more important districts have now been dealt with. The fishery law was recast in 1905 for Lower Burma, and in 1911 Upper Burma was brought under the same enactment.

Trade.—The aggregate sea-borne trade during the decade was 80 per cent. larger than in the previous ten years, and in the year 1911–12 amounted to nearly £43,000,000, of which the port of Rangoon absorbed four-fifths.

The chief feature in the import trade has been the great improvement in direct communications with foreign countries. The enormous increase in biscuits, condensed milk, cigarettes, and many other articles of luxury point to a high standard of living and to the prosperity of the people of the country. Japanese silk goods have to a certain extent replaced the native article, and the growth in the importation of cotton piece-goods and the decline within recent years in the importation of cotton yarn point to the decadence of the village weaving industry.

The rice crop, always the ruling factor in the trade of Burma, has been uniformly good and the exports have advanced in value by three-fourths. The most satisfactory feature, however, of the export trade has been the great development in other articles, such as kerosene oil, timber, hides, raw cotton and other agricultural produce, and the growth of newer enterprises, notably mining and rubber-planting, which augurs well for the future development of the country. The overland trade between Burma and China, the Shan States, and Siam very nearly doubled during the decade, despite the fact that the means of transport remain much the same. In 1900–01 it totalled £2,300,000 and in 1910–11 £4,030,000.

Baluchistan.

This report deals principally with the tracts of Baluchistan under direct British administration, since for the tribal territories we have no trustworthy statistics upon which to base our conclusions. And although, as will be shown, the alien population forms more than one-eighth of the whole, it seems proper to examine mainly, in a report of this nature, the progress of the indigenous population.

Important Features of the Decade.—In 1904 chromite mines were opened in the Hindubagh tahsil of the Zhob district. Their working has created a considerable demand for labour and also, as they lie far from the railway, for camel transport.

In the year 1905 a branch line of railway, 83 miles in length, was opened from Spezand on the Sibi-Quetta line to Nushki, the starting-point for caravans plying along the Persian trade route. The construction of this railway, together with the insecurity of Southern Persia and the greater attention paid to the control of the Nushki trade route, has diverted much trade from the Persian Gulf ports to this route and has had a vivifying effect upon the trade and transport of the country side.

Perhaps the most important change of the decade has been the growth of the capital, Quetta. Between the years 1902 and 1908 the number of troops in Quetta was greatly increased, and the creation of the Staff College at Quetta in the year 1907 has also added to the numbers of the garrison. In the result the military and alien population of Quetta, which now forms in the summer months one-tenth of the total population of the administered tracts, has become more than ever a predominating feature in the country; and it may be said that the rural population of Quetta and Pishin, and to a lesser extent of Sibi, are, from an economic point of view, falling more and more into the position of appendages to Quetta, whose ever-rising demand for supplies has revolutionised the economy of the country.

In 1909 the Railway Administration turned its attention to the export trade in fresh fruit, which in Baluchistan ripens in the monsoon period when there is little to be had in India. Special fruit trains were started, and a considerable trade in fresh

(Baluchistan.)

fruit has been developed within the last four years. This has stimulated the laying down of vineyards and the conversion of arable lands into orchards.

With regard to the tribesmen there has, within the last four or five years, been a notable change of practice in dealing with their disputes, and with the investigation into offences. The preliminary investigation into offences has, except in cases in which the district officer specially directs the police to investigate, been taken entirely out of the hands of the regular police, who are mostly aliens, and has been entrusted to the tribal levies, whose responsibility for the maintenance of order is thus increased and whose knowledge of their own tribesmen is fully used. As to the decision of tribal disputes, both civil and criminal, a tendency had arisen towards the close of the preceding decade to resort to regular judicial methods of inquiry and to withdraw cases from the councils of tribal elders. This tendency has been now completely checked; and practically all cases in which tribesmen are parties are tried under the Frontier Crimes Regulation and referred to councils of elders; so that the old beneficial custom of settling quarrels by compensation to the injured party has been restored.

The agricultural conditions of the decade have on the whole been favourable. There has been no visitation of locusts, and only three bad failures of rains and floods, in 1902 when the winter rains failed in Chagai, in 1905–06 when there was a drought in all districts, and in 1911 when the autumn rain crops were partially lost in portions of Loralai and Sibi, and crops irrigated from canals were entirely lost in Western Nasirabad owing to the lowness of the Indus floods. As, however, cultivation in Baluchistan depends mainly on perennial springs and on karezes, which are only slowly affected by variations in rainfall, there was no abrupt set-back to the prosperity of the agricultural classes. On the other hand there has been a very striking rise in the price of food-grains, so that those parts of the country in which a surplus is produced for export must have largely benefited.

Population.—The population of the districts (the states of Kalat and Las Bela being excluded) rose between the census of 1901 and that of 1911 from 382,106 to 414,412 persons, showing an increase of 32,306, or of 8·5 per cent. To this figure aliens contributed an increase of 6,809 and the semi-indigenous (mainly wandering Afghan graziers and traders) 8,416; so that the true indigenous tribesmen increased by only 17,081, or by 5·4 per cent. It is not certain how far this increase is a nominal one, due only to improved methods of enumeration, and the Census Superintendent is inclined to the conclusion that the tribal population is not much more than holding its own.

Excepting Quetta there are no towns properly so called. The population of Quetta, which rose in the decade by 9,338, varies from 33,922 (the figure found in March 1911) to about 45,570 in the hot-weather months; and to this total the indigenous population contributes only 1,427, having increased by only 88 since the last census. The tribal or indigenous population is thus in no sense an urban one. Attempts were made in the census to discover whether there had been any notable variation in the occupations of the people during the decade; but, as the systems pursued in the two censuses were different, it was found difficult to do this. The distribution of the district population by occupations was found to be as follows:—Agriculture, 274,079; pasture, 41,194; industry, 18,185; transport, 17,972; trade, 13,452; administration, 24,983; arts and professions, 6,220; domestic service, 7,158; labour (indefinite), 5,845; others, 5,324. These figures contradict the general impression that the majority of the inhabitants of Baluchistan are pastoral; but it is believed that the preponderance of agriculturists is not so great as the figures seem to show, since many living both by pasture and agriculture have returned themselves as agriculturists only. In any case agriculture and pasture together are incomparably the most important occupations. At the census it has been ascertained that the subdivisions of those occupied in agriculture are as follows:—Non-cultivating landlords, 22,531; cultivating landlords, 96,567; tenants, 58,501; farm and field labourers, 4,844. It is believed that all over Baluchistan there is a tendency for the land to fall more and more into the hands of tenants.

Of the tribal population only 54 per cent. are permanently settled, and 46 per cent. are nomadic or semi-nomadic, spending the summers in the highlands and the winters in the valleys. It is believed that in Quetta-Pishin the nomadic habit is gradually giving way to a more settled life; moreover, the number of small hamlets is increasing, as the people no longer find it necessary to herd together in large villages for safety.

A remarkable feature of this indigenous population is "an abnormal dearth of females," there being only 845 women to every 1,000 men. As a result, possibly, of this, questions relating to the elopement of women or their seduction play a very important part in the lives of the people; and the settlement of the feuds arising therefrom forms one of the principal problems before the Administration.

Agriculture.—In the greater portion of the country land revenue is assessed in kind, the tahsils of Nasirabad and Shahrig (in Sibi), Sinjawi (in Loralai), and Quetta and Pishin being the only ones regularly settled and subject to cash assessment. Most of the tahsils have now been surveyed, but at the beginning of the decade this had been done in the case of very few, so that it is not possible to discover accurately whether there has been any increase in the area under cultivation. The rainfall is so light that, except in a few favoured tracts occurring mainly in Quetta and Pishin, crops cannot be matured without the help of irrigation either from karezes, springs, river-floods or canals.

In the absence of trustworthy statistics as to the area under cultivation at the beginning of the decade, a comparison may be made of the actual average yield for the three years ending in 1902–03 and in 1911–12, of wheat, maize, and millet in the principal tracts where land revenue is assessed in kind, and where the yield is consequently ascertained by Government after every harvest. Such a comparison shows a striking rise in the average annual yield of wheat between the two selected triennial periods and a decrease in the yield of the inferior and cheaper autumn crops, maize and millet. This increase of yield has been accompanied by a marked rise in the prices of agricultural produce.

The districts of Quetta and Pishin, the Duki and Barkhan tahsils in the Loralai district and the Sibi and Nasirabad tahsils in the Sibi districts are probably the only parts where food-grains and fodder are ordinarily produced much in excess of the local requirements of the indigenous inhabitants. These tracts have therefore been able to export or sell a good share of their harvests, and the landowners and cultivators have undoubtedly benefited greatly by the rise of prices, although it is believed that round Quetta, at all events, a large share of the profits has been intercepted by the shop-keepers and money-lenders who usually finance the harvests. In most parts of the country the tribesmen want all the grain they can raise and thus probably do not benefit much by the rise in the prices of agricultural produce. In these parts, however, the incomes of the landholders are usually eked out by profits from their flocks, which, as will be seen later, have considerably increased.

In methods of agriculture there has been little or no improvement. Manure is little used except round Quetta and in lands lying in and immediately around villages; and there is no regular rotation between wheat and barley and leguminous crops as in other parts of India. This defect is set off by the fact that in most districts the water available for irrigation is so little in comparison with the extent of the arable land that long fallows are given and the fertility of the land is thereby maintained.

From the foregoing account it would seem that there is little hope of future improvement or extension of agriculture. But two experiments are being made in the Government farm near Quetta which give promise of better things. The first is the cultivation of an annual clover (*shaftal*), which not only produces a heavy and valuable crop, but also can be turned into the soil as green manure, and greatly enriches it. The second is an attempt at "dry farming." The rainfall of Baluchistan is not less than that of some countries where dry farming has been successful; and, if its practice is found possible, a large extension of cultivation may result. The experiment is being eagerly watched by local landowners. There is every prospect also of increasing profits from fruit-growing, as the rich towns of India gradually become aware of the large supply of fruit to be got from Baluchistan at a time of year when it is almost unobtainable in the plains.

Indebtedness of Agricultural Classes.—An executive order has been in force for many years prohibiting the transfer of agricultural land to aliens without the sanction of the Political Agent. Moreover, under the Civil Justice Law agricultural land cannot be sold in execution of a decree without the sanction of the local Government, which is generally withheld. Sales and mortgages of land with possession to outsiders are not therefore common, and this restriction checks agricultural indebtedness in most parts of the country. Sales and mortgages of land among the

(Baluchistan.)

tribesmen themselves are everywhere frequent; but they have not been recorded long enough or accurately enough to make comparison with the past possible. The mortgaging of crops to money-lenders is frequent both in Quetta and in Nasirabad. Round Quetta extravagance is increasing from contact with the urban population and from the fact that certain landowners, who have made large profits from the sale of their lands for building purposes, have infected others with their example.

In Western Nasirabad the landlords are, almost without exception, up to their eyes in debt to Sind money-lenders, who allow them just enough to live on, and who practically manage their estates. This indebtedness had its origin in the heavy expenditure incurred by the landowners on the long distributory channels dug by them from the main canals to their lands, and has been aggravated by natural improvidence and by the recurring failure of the canals.

Litigation, which is a fertile cause of indebtedness in other parts of India, plays no such part in Baluchistan, because, owing to the absence of pleaders and to the system of deciding almost all disputes by councils of elders, the cost of lawsuits either civil or criminal is not great, and their growth is not encouraged by interested persons.

As to the tenants, who, as already shown, are not so numerous as the cultivating landlords, their indebtedness is believed to be heavy. By far the greater number of them are tenants-at-will, except in the flood-irrigated tracts, where they have occupancy rights. Fixed cash rents are almost unknown, the usual arrangement being for the landlord and tenant to take a share of the produce, varying with the part played by either in furnishing plough-bullocks and seed-grain and in maintaining the irrigation. Liberal advances are made by Government for the purchase of plough-bullocks and seed-grain; but, nevertheless, the tenants-at-will lead such a hand-to-mouth existence that they are often deeply involved. The most serious problem of the tenant classes is believed to be the providing of themselves or their sons with wives, since with the dearth of females and the general increase of prosperity the bride price is steadily rising. Where tenants or labourers fall into debt it may be often traced to this cause.

Pasture and Live Stock.—A grazing-tax is levied upon sheep, goats, camels, donkeys, and cows and bullocks (plough-cattle and milch cows supplying milk for the private use of their owners being exempted). The collection of this tax is probably now better organised than at the beginning of the decade and the collections would therefore be somewhat higher, even if there had been no increase in the number of animals; but its amount gives, in any case, a fair indication of the numbers of live stock in the country. This tax has risen from £5,800 in 1902–03 to £11,100 in 1911–12, or has nearly doubled, and the number of live stock must have greatly increased. There is no record of the number of sheep and goats, which must be great; but it was found at the census of 1911, when plough-oxen, camels, donkeys, and horses were enumerated, that the numbers of these animals in the administered districts stood as follows:—Plough-oxen, 60,425; camels, 23,542; donkeys, 24,902; horses, 7,360. The price of wool and of clarified butter made from the milk of sheep and goats has steadily risen, and there has been no severe drought to check the natural increase of the flocks; so that there can be little doubt that the past ten years have been prosperous for the pastoral people of the hilly parts of the province. The rates of camel hire also appear to have risen, there having been a greater demand for camel transport for moving the larger surpluses of grain and fodder, the increasing trade on the Nushki route, the ore of the chromite mines, and the greater quantities of wool brought down to the railways for export.

Prices and Wages.—The prices of all produce and staple commodities, excepting cloth, have greatly risen, those of food-grains and fodder by between 20 and 30 per cent. Among the indigenous population the numbers living exclusively by their earnings and hired labourers or artificers are few. Ghilzais from Afghanistan do nearly all the work of karez digging and karez cleaning; while harvesters and the indigenous blacksmiths and carpenters who turn out sickles and ploughshares are usually paid in measures of grain, so that the rise in the price of necessaries of life does not much affect them.

The local men are not in their own country fond of such work as road-making, which is consequently done largely by labour from Afghanistan. The public works rates for this work have, owing to the more settled state of the country, actually gone down during the decade, the rate for ordinary excavation of earth, for instance, having

declined from Rs. 5 to Rs. 4 per 100 cubic feet. The rates for coolies, carpenters, and masons have been practically unchanged.

Industries.—Important discoveries of chromite ore were made in 1903 on the borders of the Zhob and Pishin districts, and 15,650 tons in all have been mined and exported during the decade. The output was largest during 1908 and 1909; but a recent fall in value has checked the industry.

The number of coal-mines in the Quetta, Sibi, and Loralai districts has increased, and the output of coal has risen from 23,079 tons in 1900 to 46,463 tons in 1911. The seams are narrow and the coal is not of first-rate quality. Moreover, except in Sibi, where the mines are near the railway, the trade is hampered by distance and bad roads. Local labour has not been much attracted either to the chromite or coal mines, partly perhaps owing to the unpleasant nature of the work, and partly to a dislike on the part of the tribesman to perform manual labour at all in a country where he is known. These industries have not, therefore, hitherto done much good to the country-side, except in stimulating the demand for transport.

The carpet industry of Barkhan is said to be on the decline, having suffered from the use of aniline dyes. The weaving of homespun is also decreasing in face of the greater use of European cotton goods. As to factories, there are four steam flour mills in the province, one at Quetta, one at Chaman, and two at Sibi; but they do not seem to have increased their business during the decade. The oil and the wool presses formerly started at Quetta have not succeeded. The Quetta Brewery, on the other hand, has increased its annual output by about 48,000 gallons, owing to the presence of a larger number of troops in Quetta. These industries again employ practically no indigenous labour.

Trade.—There was a great development of the trade with Persia and Afghanistan by the Nushki route, the total value of that trade having risen from £60,000 in 1902–03 to £247,000 in 1911–12, or having more than quadrupled during the decade. There has also been a steady development of trade with Afghanistan by Chaman.

The returns show that the hope of the Baluchistan export trade lies in its fruit, wool, and minerals, in all of which there is still room for great expansion.

Standard of Living.—In the tracts away from railways and district headquarters, although there has been a great advance in the standard of living since the British first came to the country, it is doubtful whether this has been so marked in recent years. And it is probable that any additional wealth which may be acquired from grazing or agriculture is either reinvested in larger flocks and herds, or partially absorbed by the enhancement of the bride-price due to the abnormal dearth of females in the province, and by the demands of tribal hospitality. European cloth is said, however, to have everywhere taken the place of the old homespun, and the use of the grass sandals is being more and more discarded in favour of leather boots. In Quetta-Pishin and Sibi, which are on the lines of railway, there has, on the other hand, been a marked rise in the standard of living, shown in larger and better houses, better and cleaner clothes, the increasing consumption of tea and vegetables, and the substitution of copper and brass vessels for the old wooden plates or earthen pots. It is reported from Quetta also that the use of the "burka" or thick enveloping veil with eye-slits is increasing among the women, a sign that the men can better afford to keep their women in idleness and seclusion. Changes of habit of more doubtful advantage are the increasing consumption by the tribesmen living near towns of mineral waters and cigarettes, and the growing distaste for riding among the well-to-do, who now, wherever there is a passable road, drive in hired two-wheeled pony carts to their destination, instead of going on horse-back as their fathers would have done.

Health and Sanitation. — The number of hospitals and dispensaries in the administered districts has increased from 25 to 34. If the special hospitals for women and the mission hospitals be excluded, the numbers of patients treated have risen from 203,883 in 1902 to 297,796 in 1911. The figures for aliens and for people of the country cannot be separately given. Steady progress has been made in the treatment of women; and in the villages round Sibi a few local women have been put through a course of midwifery and are slowly improving the treatment of confinement cases among the villagers.

There have been no indigenous cases of plague. Malarial fever is extremely prevalent, specially in Sibi, as the people live in the midst of irrigated lands. There

is little attempt at village sanitation, which the scattered nature of the population renders almost unnecessary. In the bigger bazars and towns, however, there has been a great improvement in the water supply, Loralai, Pishin, and Chaman having received good installations of piped water, which has had an immediate effect upon the health and prosperity of those places.

Moral Progress.—(a) *Education and Literacy.*—The number of schools has increased from 27 to 61 and the percentage of literacy among the aliens and local Hindus is high. It is curious, however, to find from the census statistics how very few of the indigenous Mussulmans are literate. In every 10,000 of both sexes of the indigenous population in the districts only 46 are literate, and in every 10,000 Mussulman males only 84 are literate, or considerably less than one in 100. Among the true tribesmen (the Baluch, the Brahui, and the Pathan) in the whole of Baluchistan, including the Kalat and Las Belâ states, there are only 2,121 literates altogether, and of these 1,544 have returned themselves as literate in Persian and only 555 in Urdu. As the medium of instruction in the vernacular primary schools is Urdu only, these figures show how little our comparatively large expenditure on education has hitherto affected the tribesmen, and that the system has up to now been mainly for the benefit of the aliens, chiefly Hindus from the Punjab.

(b) *Crime and Litigation.*—There has been in the four principal districts of Quetta-Pishin, Sibi, Loralai, and Zhob a large drop in the number of criminal and civil cases tried by regular judicial methods, and a considerable rise in the number of those referred to councils of elders.

There has been a marked increase in the number of cases concerning women, which is perhaps natural, in view of the dearth of women and the rise in the bride-price, and the greater readiness of the tribesmen to bring such cases before their own elders than before judicial tribunals; while a similar decrease in the important class of disputes about land has followed on the survey and settlement of the greater part of the province, which has nearly everywhere substituted fixed for doubtful boundaries. Taken all round, the policy of entrusting the settlement of disputes more and more to the councils of elders and of eliminating police interference from tribal matters may be pronounced a success; since, in spite of the considerable increase in population, the end of the decade shows a large decrease in litigation of all kinds.

An account of the crime of the period under review would be incomplete without some reference to the disturbed state of the border, especially in Zhob and Loralai, resulting from raids by armed outlaws and transfrontier brigands. In this respect it must be confessed that there has been a marked set-back in conditions. For the first three years of the decade the border was comparatively peaceful. From July 1904 onwards, however, Zhob has been harried by a succession of raids carried out by Mahsud and Shirani outlaws, and there have been constant conflicts between them and the Zhob militia. The worst years on the border were perhaps 1909 and 1910, when the Pishin frontier was somewhat disturbed by a series of minor raids committed by outlaws with the aid of transfrontier tribesmen; Zhob was again much harassed by Shirani and Mahsud outlaws and Sulemankhels; and parts of Loralai were troubled by outlaws of the Luni and Musakhel tribes. Loralai and Zhob continued to be disturbed until the end of the decade, but there was some improvement owing to the better distribution of bodies of troops and the granting of arms of precision to selected tribesmen for the purpose of repelling the outlaws. These disturbances may be attributed almost entirely to the flooding of Afghanistan with modern rifles imported by way of the Persian Gulf, which enable outlaws coming thence to overawe the tribesmen on the British side of the border, whose weapons, as a rule, are much inferior.

Ajmer-Merwara.

In the past ten years there were two years of scarcity and one of partial famine in Ajmer and one famine in Merwara. There was also an outbreak of plague in Ajmer and Beawar in 1909. The total population of Ajmer-Merwara has risen from 476,912 in 1901 to 501,395 in 1911. There has been an increase of 15,078 in the urban and 9,405 in the rural population.

As regards agriculture in Ajmer, there has been no appreciable change. The number of wells in the Khalsa area has increased by 2,471, but owing to a succession of bad and indifferent harvests during the past decade, and the constant removal of

cattle to pasturage outside the district, and the sale of manure, the productive capacity of the soil has, on the whole, been reduced. Merwara depends mainly on artificial irrigation. During the decade under note the average annual rainfall dropped from 21·30 to 19·37 inches, and the crops outturn diminished in proportion. The local yield of food crops is not sufficient to meet the requirements even of the rural population. The surplus is imported.

In Ajmer district the year 1903–04 was one of partial scarcity. In 1905 frost damaged the spring crops severely, and 1906 was a famine year. From 1906 to the autumn harvest of 1911 there was no bad harvest. In the bad years relief measures enabled the artisans, who did not emigrate, to tide over their troubles.

In Merwara there was only one famine during the decade, that of 1905–06, though there was scarcity in 1911–12. The townspeople are little affected by a local famine, as grain is imported by rail. In villages all classes suffer. On the whole the agricultural classes fared better during the last decade than they did in the years from 1892 to 1901, but the famine of 1905–06 and the scarcity of 1911–12 increased the indebtedness of the agricultural community.

A few small industries have been started in Ajmer and one cotton mill and two ginning factories in Beawar.

In both districts prices depend partially on those prevailing outside the districts. In the ten years under report prices and wages of artisans and domestic servants have risen. Plague and the high wages obtainable in the railway workshops and factories afford some explanation of the general rise in the price of labour.

The agriculturists cultivating their own lands are not generally progressive or intelligent; they do not take to industrial employment. The standard of living, owing to the influence of the towns, is rising. Among Rajputs, Gujars, Mers, and Minas the drink habit is prevalent, as it always has been. The three years before 1912 gave normal to bumper harvests, and the prices being high the cultivators reaped large profits. The tendency now, as always, is to squander surplus cash on social and religious ceremonies, such as marriages and funerals. The number of mortgages of agricultural land continues to increase. Indebtedness is on the increase, and after payment of the interest due on their debts the profits from agriculture leave a bare subsistence for the cultivator, and his resources extend little beyond the current harvest. The value of agricultural produce has increased, and a succession of good years might relieve the indebtedness to a certain extent. But no material advance can be anticipated in a district in which bad years occur so often that the savings of a good year are insufficient to meet emergencies. Special legislation to check the transfer of agricultural land to non-agriculturists is under consideration.

The condition of labourers has not improved, nor is any improvement to be expected, as it is this class of people which suffers most from the effects of bad years. Their standard of living continues low, but plague and famine have so reduced their numbers that even in favourable years the price of labour has been almost doubled. The advantage accruing from this to the labouring classes is discounted by the increase in the price of food-stuffs.

Artisans in the villages show no improvement, but those in the towns earn good wages. The railway workshops provide well-paid employment.

As regards townspeople, the practice of hoarding money is losing its hold on the people and is giving place to the desire for a higher standard of living in the matter of clothing, food, and houses. There is a growing demand among the upper middle classes for foreign liquors. Drink among the lower classes shows signs of increase. The local administration is giving the matter serious consideration with a view to prevent its further increase. On the other hand, there are indications of a large decline in the consumption of opium, amounting to over 30 per cent. during the decennium. The recent reorganisation of the police and excise has not yet been in force sufficiently long to affect materially the condition of the people.

A new land revenue settlement has been introduced in the last decade. In the Ajmer district the land revenue demand has been reduced. The fixed demand now shows a decrease of 12½ per cent., and is 10 per cent. below the average collections. It represents about 36 per cent. of the average assessed owners' share, or net assets, or between 10 and 11 per cent. of the estimated average annual gross produce of the tract. This reduction, and the system of variable assessment of water-rate on irrigated lands, have afforded appreciable relief in a tract dependent on precarious rainfall. To encourage the agricultural classes to retain lands in their own possession and cultiva-

tion the settlement officer has allowed a rebate of 10 to 25 per cent. to such cultivators as cultivate their land themselves. In a limited area comprising some villages which are most subject to agricultural vicissitudes a system of fluctuating assessment has been introduced as an experiment. This system is working satisfactorily, and is popular with the villagers.

In Merwara the system of variable assessment of land revenues has been introduced in 22 villages. The fixed land revenue of Merwara for the current settlement has been reduced from £8,900 to £8,300.

Coorg.

The census of 1911 exemplifies once again the danger of drawing inferences from Coorg census statistics without a very close scrutiny. According to the final totals there has been a fall of 5,631 in the population of the province; but there has in reality been a rise of 3,932 in the number of permanent inhabitants, while the immigrant population has decreased by 9,563; this latter result is explained by the fact that the area cultivated with coffee has fallen by 24 per cent. during the decade and that less labour is therefore imported.

There has been a slight increase—about ½ per cent.—in the proportion of population wholly dependent on pasture or agriculture; 47 per cent. are cultivators, 34 per cent. are labourers, and 4 per cent. artisans, out of a total of 174,976.

The last decennial report (1893–1902) was written at a time when the prospects of coffee planting were very gloomy, but though they reached an even lower level during the period now under report there is ground for recording a very decided improvement at its close. The reduced area of cultivation is more apparent than real; in the days of the coffee boom much land was planted which was utterly unsuitable, and the fact that the "slump" has forced that land out of cultivation is unquestionably a good thing for the industry generally; the fittest have survived, and there is every chance of their prospering for many a year to come.

The cardamom industry has also suffered from low prices, but during the last few years there has been a steady improvement. The cultivation of pepper has met with considerable success and is being continually extended. Three companies are now growing Para rubber below ghâts, while Messrs. Matheson & Co. have planted a large area of abandoned coffee land in South Coorg with ceara. The area planted at the end of the decade was 4,597 acres, but tapping had only commenced on a small scale. The area covered by orange gardens has been practically doubled during the past ten years, but further development will probably have to await the arrival of a railway. There has been a steady expansion of rice cultivation.

Considerable attention has been bestowed on the improvement and construction of irrigation tanks and channels; but the results have not been encouraging, and the ryots have been slow to take advantage of their opportunities.

The existing communications were kept in thorough repair during the decade and several new roads were made.

The railway question, though once again seriously mooted in 1906, has come no nearer solution; the latent possibilities of this fertile province can never be developed unless the 80-mile gulf that separates it from the business world is bridged.

Commercial industries do not exist in Coorg; even the distillery at Madapatna and the pottery and carriage factory at Mercara, referred to in the last report, have become things of the past. There is still some weaving in the villages of the hoblis in the north and a weaving school has been working for the last three years at Sanivarsante in the hope of introducing improved methods. Carpentry is being taught in some of the primary schools, and the village blacksmith still makes knives and agricultural implements.

Prices of food-grains have shown a steady tendency to rise; the price of rice during 1892–1901 averaged 10·98 seers per rupee, while during the past decade it was 10·43; the figures for ragi were 21·96 and 19·55.

Wages of labourers of all classes incline to be higher than at the commencement of the decade, and the pay of artisans exhibits the same tendency. As in other planting districts, the labour question in Coorg is destined to play a very prominent part in the near future of the province; labour is drawn from the west coast or from Mysore or the adjacent districts of Madras, but the same sources supply the extensive plantations of Travancore, Ceylon, and the Straits, and the competition grows keener

day by day. Apart from the fact that the purse of the coffee planter is not so long as that of the rubber planter, Coorg labours under the disadvantage of being 80 miles from the nearest railway, and the prospect of so long a tramp as compared with a quiet seat in a railway carriage must often decide the balance against the attractions of Coorg.

There have been no bad harvests during this decade, either in Coorg itself or in the surrounding country, such as to effect the condition of the people.

Agriculturally, socially, and financially the path pursued by the indigenous population of Coorg during the past decade has been that leading up from the universal depression that followed the bursting of the "coffee bubble" to an era of steady sober progress, strengthened by the lessons learnt in the school of adversity. Although these vicissitudes have mainly affected the Coorgs, yet they have influenced also those who have during the past two centuries thrown in their lot with the Coorgs and to a certain extent adopted their manner of life. Early in the nineties coffee cultivation had provided a royal road to wealth, and money was cheap; debts were recklessly contracted and indulgence in luxuries became habitual; there was wanting in the Coorgs the cautious and provident characteristics that might have stayed the downward course. With the closing years of the nineteenth century came the day of reckoning; neglect had ruined the estates, money that should have been spent in manure and labour had gone in fine clothes and high living; the price of their coffee had fallen from £100 to £40 a ton; the sowcars would lend no more money, for there was no security; the estates went from bad to worse—those that were worth anything found their way into the hands of sowcars, while the majority, being either inalienable, worthless, or both, were swallowed up in the all-engulfing sea of lantana, endeavouring, as it were, to hide the downfall of an industry.

But there was a haven to which an agricultural race could—and did—turn at this juncture, and out of their fertile and unfailingly watered paddy fields the Coorgs are once more building up a moderate degree of prosperity. Some few have still their coffee estates, but the Coorg ryot to-day is a paddy cultivator, not a coffee planter. He now has to combat three curses which have been cast over his countrymen by the coffee boom—intemperance, indebtedness, and lantana. He is doing so with considerable success, and with credit to himself.

During recent years the number of arrack shops has been reduced from 56 to 36, and the toddy shops from 541 to 111 during the decade; there is little doubt that the results have been satisfactory.

Excessive indebtedness has been stimulated by the Moplah money-lender who comes up to Coorg at the time of the ryots' greatest need, June to September, lends small sums at most exorbitant rates, amounting at times to as much as 250 per cent., and goes away after the harvest. This trouble, however, is being met to some extent by the co-operative credit societies, and as they advance the Moplah must retreat; the movement began in 1906 with six societies and a capital of £630, whereas there are now 22 societies with £4,300 at their disposal.

From the standpoint of an agricultural community, lantana has done almost as much harm as either of the other evils; imported about 1860 as a fence, it has spread over uncultivated land to such an extent that in 1906 no less than 70,000 acres of private land and 40,000 acres of Government waste were found to be covered with it. This has reduced the grazing area, encouraged fires, destroyed jungle, harboured wild animals and rendered homesteads unhealthy to an extent that has rightly aroused alarm. After many futile efforts the ryots were in 1906 induced to regard the matter seriously, and a campaign was started which has already resulted in the reclamation of nearly half the area; perseverance on the part of the ryot and a consistent attitude on the part of Government are all that is now needed.

The labouring classes have not suffered in the same manner as the proprietors; good seasons raise the price of labour, but bad ones do not depress it to the same extent. The labourer is rather better off to-day than ten years ago, though traders have suffered by the curtailing of expenditure on luxuries.

Madras.

The decade which came to a close in 1902 was marked by a series of bad seasons, particularly those of 1896–97 and 1899–1900. The ten years ending with 1911–12 proved more fortunate. There was no famine, though local scarcity occurred in three

(Madras.)

districts in 1905 and in one district in 1908, and several seasons may be labelled as distinctly prosperous. Public health was good. The recent census shows an increase of 8·3 per cent. in the population. Excluding Travancore and Cochin, the Madras Presidency now numbers close upon 42 million people, with a mean density of 291 to the square mile. The fact that Madras, like other parts of India, is an agricultural country is well known, and more than two-thirds of the population are dependent on the land. This proportion is practically the same as it was at the previous census.

From a purely economic standpoint the main feature of the decade has been the high range of prices for all food-grains. The general levelling of rates throughout the Presidency was noticed in the last decennial report, and this movement has continued. Prices are indeed governed not only by the local market, but by the rates prevailing in other parts of India, and even beyond India. The widespread failure of crops in Northern India in 1907 and 1908 kept food-grain prices in Madras during those years at scarcity limits, although the local seasons were favourable and trade figures were the highest on record. For the ten years ending with 1890–91 the average selling price of rice was 14·7 seers to the rupee, while for the succeeding decade the corresponding figure was 11·2. During the past ten years the average dwindled to 10·1 seers, and the actual average for 1908–09, which was a fairly prosperous year, was 7·5 seers. A similar rise in prices is noticeable in all districts and for all food-grains, and it may be confidently asserted that the low rates of earlier years will never recur.

Prices of industrial crops have also risen, and it naturally follows that the value of land has increased. To the man in possession of land yielding more than enough for his maintenance these high prices spell prosperity, and there are many signs that the ryot is improving in intelligence and position. Other causes also contributed to the general enhancement of land values. The failure of a big banking concern in Madras in 1906 shook the general confidence in banks and diverted capital to the land. But whatever be the cause of the increase, the fact remains that property in land is increasing in value, and that owners and occupiers of land have profited. Land is not passing out of the hands of agriculturists to any great extent, for the bulk of all land sales and mortgages take place between members of the agricultural class. Money is lent at rates varying generally between 6 and 12 per cent. The ryot is very ready to adopt improved methods of agriculture, and to profit by the better markets. Experiments conducted under Government experts at various selected stations have indicated such improvements, of which the most important is the method of planting paddy. An enormous waste of seed paddy is entailed by close planting in seed-beds and by replanting the seedlings in clumps. It has been found that by planting out well-developed seedlings the quality and quantity of the grain are improved. The knowledge of this improved system is spreading rapidly, especially in the southern districts, and promises to revolutionise the time-worn customs of the past. It is estimated that at least 60 lbs. of seed paddy per acre can be saved, and taking the total acreage under paddy cultivation as 10,000,000 acres, the possible saving of grain for food may be reckoned in thousands of tons. Cotton is the chief industrial crop, and similar improvements have been demonstrated by careful selection of seed. The expansion of cotton cultivation has been marked, and exports have more than doubled in quantity and more than trebled in value. But the most noticeable feature has been the introduction of Cambodia cotton, which closely resembles the American Upland. It flourishes as a heavily manured irrigated crop, and the first attempts to grow it as an ordinary dry crop failed. Its success under irrigation has been so great that during the last five years of the decade the output has expanded from 40 bales, weighing 500 lbs. each, to an estimate of 80,000 bales. This cotton gives a far higher percentage of lint to seed and a better length and quality of fibre. In money value it is estimated that one acre will produce lint valued at Rs. 225 as against a value of Rs. 37 from ordinary Tinnevelly cotton on dry land. This explains why Cambodia cotton cultivation is increasing so rapidly, and is even replacing such valuable crops as chillies and tobacco. Ground-nut cultivation has been revived by the introduction of Mauritius seed and by rotation with a cereal crop. A comparison of the total areas cropped under all kinds of crops at the beginning and close of the decade is rendered difficult by the inclusion in the later figures of large zamindari areas. Allowing for this, there was an increase of about 1·3 million acres in cultivated area and ·4 million acres in area cropped twice.

(Madras.)

The Agricultural Department, which was instrumental in bringing about the above-mentioned improvements, was thoroughly reorganised and strengthened, and the college was moved to a fine building near Coimbatore. District farms were established for experiment and demonstration, and agricultural education was given an entirely fresh start.

The sweeping reductions in the salt duty brought down the retail price of salt and increased the average consumption. These changes had a marked effect on the well-being of the lower classes, and it is especially noteworthy that whereas in 1902 some 6,000 persons were charged with salt crime, the corresponding number in 1911 was slightly over 200. But the high prices of food-grains necessarily impose hardship on the poorer population, and especially on those in receipt of fixed money wages. The steady rise of food prices in recent years has been followed by a general increase in wages, whether paid in cash or in kind. A wage-census taken throughout the Presidency in August 1911 confirms this statement. The wages of unskilled labour have everywhere shown a marked tendency to rise. In towns this increase was not universal, but the period of comparison was only three years, while the system of recording wages was new, and the figures are therefore open to doubt. Domestic wages have certainly risen, and Government servants on low pay have for several years past been granted grain compensation allowances. Emigration, which is on the increase, also served to augment the rates for unskilled labour. There is a general cry that agricultural labour is scarce, but it is possible that employers are slow to realise that altered conditions demand an alteration in the terms of hire. The monthly rates of wages for farm servants, however, followed the general rise. Wages of artisans also rose.

It may be fairly said that the people are becoming alive to the necessity of the creation of some new measure of industrial life. There is a strongly-marked tendency to industrialism on a small scale. Under the Factories Act all establishments employing daily not less than 50 people are brought under registration. The returns show a large increase in the number of such factories, with a much smaller increase in the number of operatives, and it is also certain that many small concerns exist which do not come within the scope of the Act. The steady increase during recent years in the imports of machinery, scientific apparatus, and chemicals points to the growth of enterprise, and the great demand for oil and gas engines indicates that mechanical power is replacing hand labour. Many of these engines are indeed used for lifting water for irrigation and for drainage, but there is a strong movement in favour of mechanical power for all purposes. The diffusion of education, the swadeshi movement, the rise in prices, and the even greater rise in the cost of labour, have led to a better appreciation of modern methods of working. New ideas are slowly permeating the mass of the population, and the economic pressure due to improved means of communication with the rest of the world is bringing about a marked change in the method of production. It appears that the actual number of people engaged in industry is decreasing, or at least is stationary, and this would indicate a development in the use of machinery. Concrete instances are to hand in the general use of machinery for hulling paddy and cleaning rice, and in the disappearance of hand-spinning of cotton. Great improvements have been introduced into the primitive processes of the indigenous weavers, and a recent investigation along the East Coast from Godavari southwards showed that not less than 10,000 weavers had adopted fly-shuttle slays in their looms, thereby increasing their earnings by fully 33 per cent. The spontaneous development of the dyeing industry in Madura must also be noticed. The dye trade of Madura now deals with fully 2,000 bales of cotton in a month. The Buckingham and Carnatic Mills in Madras are the largest cotton factories in the south, and the dyeing and bleaching business has developed under their management. Each of these mills employs about 5,000 people daily, whose individual wages have increased from 50 to 80 per cent. during the past 20 years. An interesting development is also noticeable in a scheme called the "Workpeople's gratuity fund," introduced by the management in 1903. Each operative is credited in the books with a gratuity of 5 per cent. of his monthly wage, and at the end of every half-year in which the mill has worked to a reasonable profit a similar amount is added, the whole bearing interest at 4 per cent. per annum. Each employé must serve 10 years before he can draw upon this fund, but payments are made in case of injury or death. The success of this scheme has been most marked, and no strikes have taken place amongst the workmen since its introduction.

(Madras.)

A new industry has been started on the west coast under the guidance of Sir Frederick Nicholson for the manufacture from the oil-sardine of fish oil and guano. There is an assured market for these products, and the industry promises large profits to small factories scattered along the coast line. Sardines in many thousands of tons have long been dried whole on the beach for manure, but by this wasteful process all the oil was lost.

Trade statistics show immense development. Each year the figures of the total sea-borne trade have exceeded those of the previous year and have exhibited none of the fluctuations that are observable in the trade figures of other presidencies. Sea-borne trade naturally flows to those ports where facilities for landing, shipping, and storing are most convenient and where railway and steam freights are most favourable. The port of Madras is offering increased facilities, and trade has responded very readily. On the west coast the most noticeable development has been the copra trade from Cochin, where the products of the cocoanut palm form the main item of trade. The demand on the Continent for copra, which is the dried kernel of the nut, is very keen, both for the purposes of soap-making and the manufacture of vegetable butter, and in ten years the exports from the Presidency have grown in value from about £120,000 to £753,000. Rail-borne trade also shows many striking features. Taking trade generally, the rapid growth of the import trade as compared with export is noteworthy, but the export trade also shows great expansion. Raw skins, tanned hides, and tanned skins, together with paddy, rice, and coir, form the principal items of export, and as in all cases these commodities have increased in value, the larger figures of exports are partly accounted for by increase in value. It is well known that no corresponding rise has occurred in the value of manufactured goods. The position of the country, largely exporting raw material and largely importing finished industrial products, has therefore enormously improved. The same volume of weight of exports now commands a very much larger equivalent in the shape of manufactured goods.

The Madras Estates Land Act of 1908 is the most important measure that has been placed upon the statute book for many years. It defines for the first time the substantive rights and obligations of landholders and their tenants. The previously existing statute law related to procedure, but the Act of 1908, while amending this procedure, gave statutory authority to the law of landlord and tenant. It secured occupancy right to every cultivator of estate land not being private domain or home-farm land. The Act has resulted at its outset in a greate increase of litigation, which will probably decrease as its provisions are better understood.

The decennium will, however, be chiefly remembered as that during which the first scheme of co-operative credit took legal form. The Act of 1904 permitted the creation of societies of 10 or more individuals for the advance of money to members on mutual responsibility. There are at present nearly 1,000 such societies distributed unequally over the Presidency and partly financed from central co-operative banks, while unions are being started to undertake the inspection and external government of member societies. The working capital involved is nearly £200,000, and money has been lent, chiefly for productive purposes, to some 23,000 borrowers, who are thus saved at least £10,000 in annual interest alone if the rates actually paid be compared with the current rates of local money-lenders. But the indirect benefits of the movement are of far greater importance. The frequent conferences of societies afford new opportunities for the exchange of ideas and educate the members in self-help and self-government; the co-operative system has brought about in one locality the spontaneous revival of village panchayats; and some societies have devoted a portion of their net profits to free elementary education. The new Act of 1912 marks the beginning of the current decade and expands the law in various directions, but the period just ended can claim the origin of a movement which contains the most powerful elements of moral as well as material progress.

The people themselves are evincing an ever-increasing interest in the course of public affairs. English newspapers have increased in number and circulation, but the main channel for the dissemination of news is the vernacular press. The number of such papers has grown materially, and during the decade their circulation has increased twofold. Many of them are mere leaflets, and the information conveyed is often incorrect, but their rapid growth gives evidence of a growing demand. Education as judged by ability to read and write is steadily, if slowly, spreading, but the railways provide a better measure of educational growth. Year by year the

(Madras.)

volume of traffic, especially of third-class traffic, is increasing and every traveller must be struck by the crowds of expectant passengers at each station. Caste and creed mingle in friendly rivalry for the few vacant seats, unmindful of the hours of weary waiting which the Indian rustic considers a necessary preliminary to any journey. It cannot be doubted that travel is a strong educative factor. Moreover, the increase in traffic predicates the existence of spare money to pay for railway fares, and the fact that the annual number of passengers carried by one railway alone has increased during the last ten years by over eight millions is in itself valuable evidence of prosperity.

Bombay.

The decade ending 1901 closed with years of severe famine following three years of scarcity and the outbreak of plague. The first two years of the decade under report were good, but were followed by two bad years, three which may be described as fair, and two very fair. The final year was one of great scarcity, especially in Gujarat. A characteristic of the seasons has been the repeated deficiency of late rains.

The last year of the present decade is interesting because it illustrates the great change which has taken place in the economic condition of the masses. The rainfall was so scanty that there is no doubt that in the previous decade famine would have been declared in Gujarat and the eastern districts of the Deccan. But in fact famine was declared only in the Panch Mahals district, where the population consists largely of primitive tribes. In other districts the opening of test works failed to attract labourers. The wages paid for unskilled labour remained much above the famine scale even in the worst tracts. The demand for labour on constructional works on the railways, in Bombay and other places such as Lonavli, where the Tata electric works are in progress, prevented the possibility of starvation amongst the masses. It was cattle and not men that were in danger from starvation; and for the preservation of these active measures of relief were taken by Government and private charitable organisations. The population of Gujarat had gained experience in the famine of 1901, and it is hoped that the experience of 1911 will teach the people the wisdom of providing against fodder famines in future.

Plague did not cease its ravages, and the first three years were marked by high mortality from this cause, the heaviest occurring in 1903, when 281,000 people died. Malaria continues to claim by far the largest number of victims—2½ millions out of a total of 6¼ millions for the whole decade. It is, however, probable that a large number of deaths are ascribed to fever which are due really to other causes.

The average death-rate during the decade is 34 per mille, as compared with 43 in the previous 10 years. The ravages of plague have taught the wealthier classes at least the importance of clean and healthy surroundings. Suburbs have sprung up outside Bombay and the more important towns. The prejudice against inoculation is decreasing, as is evidenced by the fact that the number of inoculations in the year 1911 was more than treble that of the previous year. The birth-rate has risen to 37 per mille, but the heavy mortality from plague during the earlier part of the decade arrested the growth of population, and the net increase does not amount to one-half of the normal. It is only in Sind that the total population shows a normal increase. The urban population has fallen everywhere except in Sind, where there was an increase of 13 per cent.

Of the 13¼ millions dependent on agriculture, nearly nine are ordinary cultivators and 3¼ are farm servants and labourers, while half a million derive their living from the rent of agricultural land, and 325,000 are herdsmen. These figures, which are from the census of 1911, show an advance of nearly two millions, which is greater than the total increase of population. Owing to differences in the methods of enumeration it is probable that the increase must be discounted by the fact that in 1901 1,232,000 persons were classified as labourers and workmen otherwise unspecified, while in 1911 only 383,000 appear under that class.

The percentage of persons connected with agriculture is 67·1 per cent. of the total population. The percentage of persons having interest in land to the total agricultural population has risen from 69 to 71 per cent., with a corresponding decrease under agricultural labourers. Though it is difficult, owing to differences in the methods of classification, to compare the figures of the last census with the previous one, there can be no doubt that agricultural labour has become scarce and dear. The smallholder, especially in Gujarat, complains that his labourers desert

(Bombay.)

him for the mills and only inferior workers are obtainable. The continuance of these conditions must react upon the standard of cultivation, which in Gujarat has always been high. Many landholders have been compelled to lease out their lands to men who were formerly their labourers, and this perhaps has swelled the numbers of those having interest in land.

The distinction between landlords, tenants, and agricultural labourers in this Presidency is not clearly defined. As much as 3½ per cent. of the landlords and a still larger proportion of the tenants are agricultural labourers. Owing to the smallness of a large number of the holdings, even in normal years a family cannot maintain itself on the produce without resort to labour in the towns or in the fields of the larger holders. The effect is to drive families into the large cities for a portion of every year, and in spite of the cultivator's love of his land a certain proportion tend to become permanent residents of the cities. The moral and physical effect upon the agricultural population is bad, because at such times of the year the influx of labour causes overcrowding of the worst description. The evil is accentuated in years of scarcity, and though the cities may provide a living for a large number of the rural population who might otherwise have resorted to famine works, yet harm is done to the interests of agriculture.

The percentage of agriculturists engaged in raising farm stock has risen slightly, but is very small. Plough-cattle are not bred extensively in the Presidency, and the ordinary cultivator generally buys his cattle from breeders who come from native states. The increase, therefore, does not represent the rapid rise in the number of agricultural stock which followed the famine of 1901. By 1909–10 the loss of two million cattle owing to famine was made up, except for 200,000 head. It is probable that any advance made in 1910 was discounted in 1911, and that there is still a serious shortage of plough-bullocks at the close of the decade.

The industrial population amounted to about 2½ millions, or 12·7 per cent. of the total. There is no doubt that the decade has been one of industrial and commercial activity. The premier industry of the Presidency has shown a rise of 20 per cent. under spinning and weaving mills, and the same percentage under cotton gins and presses. The rise of Ahmedabad, where the mills are in the hands of Indian merchants, has been remarkable. The enlightened attitude of the millowners of Bombay on the question of the housing of mill-hands, and their enterprise in forming syndicates for the encouragement of the growth of cotton of superior staple, show that there is no stagnation in the attitude of the trade. The hand-loom industry has held its own. The conservative attitude of the weavers towards innovations prevents the rapid introduction of improved looms and methods, but some progress has been made in conjunction with the co-operative credit movement.

Commercial activity, especially amongst Indians, is evidenced by the formation of a number of new banks, of the Native Merchants' Association and Bureau, and the Grain Merchants' Association. These bodies have been organised to raise capital for, and to protect the interests of, the various branches of commerce to which they relate. There has been no notable extension of the railway system in the Presidency; but the continuous increase in passenger traffic which has taken place is an indication of the growing prosperity of the masses. The receipts on the G.I.P. Railway under this head rose from £805,000 in 1902 to £1,357,000 in 1911. The increase on the other lines, great and small, is equally remarkable. The figures for rail-borne trade show a progressive increase from 97,107 thousand maunds in 1902 to 159,143 thousand maunds in 1911. The figures for imports and exports by sea bear a like testimony to the expansion of commerce.

A noticeable feature of the decade has been the tendency to extend the cultivation of cotton. Under the stimulus of high prices, the area under this crop shows a rise of 50 per cent. over that reported in 1902–3, having increased from 2,800,000 acres in that year to 4,200,000 acres in 1910–11. This crop has shown greater powers of resistance to drought than others, and though the yields were often low, yet the continuance of high prices put money into the pockets of the cultivators. The last year of the decade was remarkable for the fact that the price of the finer grades of cotton in the Presidency rose above that of the Middling American and consequently a large quantity of the latter was imported for the use of the Bombay mills. The increase in the area under non-food crops was accompanied by a slight fall in that under food crops, especially cereals. Pulses, which are more resistant to drought, remained stationary. The decrease in the area under cereals must be regarded as temporary. There are signs that the need for fodder and the rise in prices will soon

lead to an increase in production proportionate to the growth of population. The areas under crops other than cotton for which forecasts are prepared, namely wheat, sesamum, linseed, rapeseed, groundnut, and sugar-cane, show no progressive increase except in the case of groundnut, the area under which has risen from 57,358 acres in 1902 to 201,016 in 1911. The demand for this in Europe is growing rapidly. The fact that sugar-cane shows no decrease, but a tendency to the contrary, in spite of the fact that the import of foreign sugar has risen enormously, is evidence of the fact that the latter commodity, which is regarded as a luxury, is being consumed to an increasing extent by the masses.

The increase in the rates of wages for skilled and unskilled labour which has taken place in all parts of the Presidency, and especially in Sind, is not accounted for by the rise in prices alone, and the consumption of sugar is an indication that the working classes have more to spend on luxuries. The consumption of liquor has risen, but in a few localities the more wholesome toddy has replaced the use of other liquors to a slight extent. The rapid multiplication of places of refreshment where tea is sold is remarkable, and the beverage is becoming popular with the masses. Except in the case of rice, the staple food-grains have not shown any marked progressive increase during the decade, and rice is not consumed in large quantities by the labouring classes. If it were assumed that the whole population of the Presidency lived entirely on the food-stuffs produced in the Presidency, the produce from them was more than sufficient in good years. In 1902–03, which was a good average year, it is calculated that there was a surplus which would have lasted for two months, and in Sind for three months in 1909-10. In less favourable years there was no surplus and in the bad years of the decade a deficit. This calculation does not allow for the fact that the population of the sea coast live largely on fish and that the Muhammadans and many Hindus, especially in Sind, consume meat. The aboriginal tribes also live for four or five months of the year mostly on wild fruits and roots from the forests. On the other hand, the net exports of food-grains must be considered.

The maintenance of high prices has affected no class except the small one dependent on fixed incomes, and persons in Government and other similar service where rises in salary generally lag behind the rise in the cost of living.

The indifferent character of the seasons has caused greater hardship to the small cultivator with a holding of 20 acres or so than to any other class. Such men lose their stock or have to pay exorbitant prices for fodder to maintain their cattle during years of scarcity, and they are unwilling to lower their social status by a resort to casual labour. Indebtedness has increased amongst them, but not to the same degree as occurred in the last decade.

It is generally admitted that the Deccan Agriculturists' Relief Act has had the effect of imposing a restriction on facilities for credit, and has discouraged too lavish expenditure on marriage ceremonies. The spread of the co-operative credit movement has at the same time made a very promising commencement of providing capital for the needs of the agricultural and industrial population, and acted as an incentive to thrift. In 1911 the number of members of co-operative credit societies rose from 19,640 to 29,419 and the working capital from £86,000 to £214,000. At the co-operative conferences many instances were cited of cultivators, weavers, and members of other classes having been freed from indebtedness through the agency of the societies to which they belonged.

The only change of importance in the land revenue system during the decade has been the introduction of a regular system of suspensions and remissions in the Presidency. This has introduced more elasticity into the collection of Government demands, which instead of being recovered alike in years of scarcity and prosperity are now suspended in a bad year and recovered only in proportion to the estimated outturn of the years following upon it. Liberal remissions have been given when a succession of bad years has occurred. Sind has long enjoyed the benefit of a system of remissions.

On the whole the decade has been a period of general prosperity, of a wider distribution of wealth, and of the expansion of industry and commerce. The demand for the extension of primary education has been attended by a large increase in the number of schools. The advantages of a scientific and commercial education are beginning to be realised, and a decrease in the number of persons adopting the legal profession is noticeable. The growth of independence of thought and action amongst most classes of the community has been a feature of the decade.

APPENDIX I.

LIST OF INDIAN OFFICIAL REPORTS, &c.

(MOSTLY ANNUAL.)

General.

Statistical Abstract relating to British India (Parliamentary Paper).

Statistics of British India:—

Part I.—Industrial (Factories, Mills, Mines, &c.).
Part II.—Commercial (Foreign Trade and Shipping, &c.).
Part III.—Commercial Services (Post Office, Railways, Telegraphs, &c.).
Part IV.(*a*)—Finance and Revenue (Paper Currency, Coinage, Public Debt, &c.).
Part IV.(*b*)—Finance and Revenue (Principal Heads of Revenue, Salt, Opium, &c.).
Part V.—Area, Population, and Public Health (Area, Population, Emigration, Births and Deaths, Vaccination, &c.).
Part VI.—Administrative and Judicial (Administrative Divisions, Civil and Criminal Justice, Registration, Police, Jails, &c.).
Part VII.—Educational (Education, Printing Presses, and Publications).
Part VIII.—Local Funds (Municipalities, Local Boards, and Port Trusts).

Census Reports (Decennial), India and Provincial.

Administration Reports: Madras, Bombay, Coorg, United Provinces, Punjab, Bengal, Central Provinces and Berar, Burma, Bihar and Orissa, Assam, Andaman and Nicobar Islands, Civil and Military Station of Bangalore, Ajmer-Merwara, Baluchistan, North-West Frontier Province.

Justice and Police.

Report on the Administration of Civil Justice for each Province.

Report on the Administration of Criminal Justice for each Province.

Report on Jails for each Province.

Reports on Police for each Province, and for Bombay Town and Island, Calcutta, and Rangoon.

Finance.

Finance and Revenue Accounts of the Government of India.

East India Financial Statement (Parliamentary Paper).

Return of Net Income and Expenditure for eleven years (Parliamentary Paper).

Accounts and Estimates: Explanatory Memorandum (Parliamentary Paper).

Home Accounts (Parliamentary Paper).

Estimate of Revenue and Expenditure (Parliamentary Paper).

Loans raised in England (Half-yearly Parliamentary Paper)

Loans raised in India (Half-yearly Parliamentary Paper).

Mint Reports for Calcutta and Bombay.

Paper Currency Department Report.

Statistics compiled from the Finance and Revenue Accounts.

Land Revenue, &c.

Land Revenue Administration Provincial Reports for Lower Provinces (Bengal), Bihar and Orissa, Assam, United Provinces, Bombay Presidency (including Sind), Punjab, Central Provinces and Berar, Burma, and Madras.

Report on Land Revenue Administration, Land Records, Settlement Operations, Alienation of Land Act, &c. for North-West Frontier Province.

Madras Survey, Settlement and Land Records Department Report.

Reports of Land Records Departments for Bombay, Burma, Bengal, United Provinces, and Punjab.

Report on Settlement Operations, Punjab.

Reports on Survey and Settlement Operations, Bengal and Eastern Bengal and Assam.

Reports on Operations of the Land Records and Settlement Departments, Central Provinces and Berar.

Report of the Talukdari Settlement Officer, Bombay.

Provincial Reports on the Administration of Estates under the Court of Wards.

Report on the Punjab Canal Colonies.

Separate Revenue (Salt, Excise, &c.).

Salt Department Reports: Northern India, Madras, Bombay, Sind, Bengal, Burma, Eastern Bengal and Assam.

Excise Report for each Province.

Opium Department Reports: United Provinces and Bombay.

Stamp Department Report for each Province.

Registration Department Report for each Province.

Income Tax Report for each Province.

Provincial Rates Report for Eastern Bengal and Assam.

Agriculture and Veterinary.

Report on the Progress of Agriculture in India.
Report of the Agricultural Research Institute and College, Pusa.
Bulletins of the Agricultural Research Institute, Pusa, and of the Provincial Departments of Agriculture.
Memoirs of the Department of Agriculture.
Proceedings of the Board of Agriculture.
Agricultural Journal of India (quarterly).
Report of the Department of Agriculture in each Province.
Reports on various Agricultural Stations, Experimental Farms, and Botanic Gardens.
Season and Crop Report for each Province.
Agricultural Statistics of India.
Area and Yield of certain Principal Crops.
Report on Production of Tea in India.
Report on Tea Culture in Assam.
Statistics compiled from the Reports of the Provincial Civil Veterinary Departments.
Report of the Veterinary Officer investigating Camel Diseases.
Report of the Imperial Bacteriologist (Veterinary).
Reports of the Civil Veterinary Departments for Madras, Bombay, United Provinces, Punjab, Bengal, Burma, Assam, and North-West Frontier Province.

Co-operative Societies.

Statements showing Progress of the Co-operative Movement in India.
Report on Co-operative Credit Societies for each Province.
Reports of Conferences of Registrars of Co-operative Credit Societies, India and Provincial.

Forests.

Review of Forest Administration in British India.
Report on Forest Administration for each Province.
Reports of the Forest Research Institute and the Imperial Forest College, Dehra Dun.
Indian Forest Memoirs.
Indian Forest Records.
Forest Bulletins.

Mineral Production and Mines.

Review of Mineral Production (in Records of Geological Survey).
Report on Production of Coal in India.
Report of the Chief Inspector of Mines.

Trade and Manufactures.

Annual Statements of Sea-borne Trade and Navigation, India and Provincial (Madras, Bombay, Sind, Bengal, Burma, Eastern Bengal and Assam).
Review of the Trade of India (Parliamentary Paper).
Tables of the Trade of India (Parliamentary Paper).
Provincial Reports on Maritime Trade and Customs (including working of Merchandise Marks Act) for Bengal, Eastern Bengal and Assam, Bombay, Sind, Madras, and Burma.
Accounts of Sea-borne Trade (monthly and for Calendar Year).
Accounts of Land Trade (monthly).
Annual Statement of Coasting Trade of British India.
Report on the Trade and Navigation of Aden.
Accounts of Trade carried by Rail and River in India.
Report on Inland, Rail-borne, or Rail-and-River-borne Trade for each Province.
External Land Trade Reports for Bengal, Eastern Bengal and Assam, Burma, United Provinces, Punjab, North-West Frontier Province, Sind, and British Baluchistan.
Indian Trade Journal (weekly).
List of Joint-Stock Companies in British India and Mysore.
Reports on the working of the Indian Companies Act (Provincial).
Report on the working of the Indian Factories Act for each Province.
Report of the Chief Inspector of Explosives.

Public Works.

Administration Report on Railways (Parliamentary Paper).
Railways and Irrigation Works. Return of Capital Expenditure, &c. (Parliamentary Paper).
Provincial Reports on Public Works (Buildings and Roads).
Report on Financial Results of Irrigation Operations.
Report on Irrigation Revenue for each Province.
Reports of Madras and Bombay Irrigation Departments.
Annual Report on Architectural Work.

Post Office and Telegraphs.

Post Office Report.
Report of Indian Telegraph Department.
Report of Indo-European Telegraph Department.

Scientific Departments.
Report of the Operations of the Survey of India.
Records of the Survey of India.
Records and Memoirs of the Geological Survey of India.
Report of the Indian Meteorological Department.
Indian Weather Review, Annual Summary.
Rainfall of India.
Memoirs of the Indian Meteorological Department.
Report of the Meteorologist, Calcutta.
Report of the Director-General of Observatories.
Memoirs and Bulletins of the Kodaikanal Observatory.
Report of the Board of Scientific Advice.
Report of the Archæological Survey of India, and Provincial Reports.
Report and Records of the Botanical Survey.

Education, Literature, and the Press.
Education Report for each Province.
Quinquennial Review of Education (Parliamentary Paper).

Local Self-Government.
Reports on Municipalities for each Province and for Calcutta, Bombay City, Madras City, and Rangoon.
Report on District and Local Boards or Local Funds for each Province.
Reports of Port Trusts of Calcutta, Bombay, Madras, Rangoon, Karachi, and Aden.

Medical, Sanitary, and Vital Statistics.
Report of the Sanitary Commissioner with the Government of India.
Report on Sanitary Measures in India (Parliamentary Paper).
Report of the Sanitary Commissioner for each Province.
Vaccination Report for each Province.
Report on Civil Hospitals and Dispensaries for each Province.
Report on Lunatic Asylums for each Province.
Report of the Chemical Examiner and Bacteriologist for each Province.
Scientific Memoirs by Officers of the Medical and Sanitary Departments.
Reports of the All-India Sanitary Conferences.
Reports of the Imperial Malaria Conferences.
Paludism (Transactions of the Committee for the Study of Malaria).

Emigration and Immigration.
Calcutta Port Emigration Report.
Bengal Inland Emigration Report.
Assam Immigration Report.

Prices and Wages.
Prices and Wages in India.
Variations in Indian Price Levels.
Reports of Provincial Wage Censuses.

APPENDIX II.

Indian Currency and Weights and Measures.

Currency.—The Indian denominations with their British equivalents are—

Pie	= $\frac{1}{12}$ penny.
Pice (3 pies)	= 1 farthing.
Anna (12 pies)	= 1 penny.
Rupee (16 annas)	= 1*s.* 4*d.*

A lakh (lac) is 100,000 rupees and a crore is 100 lakhs.

Weights and Measures.—The weights adopted in Government transactions and by the railway companies are as follows :—

1 tola	= 180 grains		= 11·66 grams.
1 chittak (5 tolas)	= 900 „		= 58·32 „
1 ser (16 chittaks)	= $2\frac{1}{2}$ troy lb.	(or $2\frac{2}{35}$ lb. avoir.)	= 933·10 „
1 maund (40 sers)	= 100 „ „	(or $82\frac{2}{7}$ „ „)	= 37·32 kgms.

APPENDIX III.

ROYAL COMMISSION ON INDIAN FINANCE AND CURRENCY.

The terms of reference to the Royal Commission on Indian Finance and Currency, appointed in April 1913, with the Right Hon. Austen Chamberlain, M.P., as Chairman, were as follows :—

" to inquire into the location and management of the general balances of the Govern-
" ment of India; the sale in London of Council Bills and Transfers; the measures taken
" by the Indian Government and the Secretary of State for India in Council to maintain
" the exchange value of the rupee in pursuance of or supplementary to the recommen-
" dations of the Indian Currency Committee of 1898, more particularly with regard to
" the location, disposition, and employment of the Gold Standard and Paper Currency
" Reserves; and whether the existing practice in these matters is conducive to the
" interests of India; also to report as to the suitability of the financial organisation and
" procedure of the India Office; and to make recommendations."

00134464

Digitized with financial assistance from

Government of Maharashtra

on 01 February, 2020